

S. 1963

At the request of Mr. BAUCUS, the name of the Senator from Minnesota (Mr. COLEMAN) was added as a cosponsor of S. 1963, a bill to make miscellaneous improvements to trade adjustment assistance.

S. 2081

At the request of Mr. COLEMAN, the name of the Senator from Georgia (Mr. ISAKSON) was added as a cosponsor of S. 2081, a bill to improve the safety of all-terrain vehicles in the United States, and for other purposes.

S. 2131

At the request of Mr. GRASSLEY, the names of the Senator from Wisconsin (Mr. KOHL) and the Senator from South Dakota (Mr. JOHNSON) were added as cosponsors of S. 2131, a bill to amend title 9, United States Code, to provide for greater fairness in the arbitration process relating to livestock and poultry contracts.

S. 2154

At the request of Mr. OBAMA, the name of the Senator from Georgia (Mr. ISAKSON) was added as a cosponsor of S. 2154, a bill to provide for the issuance of a commemorative postage stamp in honor of Rosa Parks.

S. 2172

At the request of Ms. LANDRIEU, the name of the Senator from Louisiana (Mr. VITTER) was added as a cosponsor of S. 2172, a bill to provide for response to Hurricane Katrina by establishing a Louisiana Recovery Corporation, providing for housing and community rebuilding, and for other purposes.

S. 2179

At the request of Mr. OBAMA, the name of the Senator from Indiana (Mr. BAYH) was added as a cosponsor of S. 2179, a bill to require openness in conference committee deliberations and full disclosure of the contents of conference reports and all other legislation.

S. 2185

At the request of Mr. HAGEL, the names of the Senator from Nevada (Mr. REID), the Senator from Michigan (Ms. STABENOW) and the Senator from New Jersey (Mr. MENENDEZ) were added as cosponsors of S. 2185, a bill to amend part B of the Individuals with Disabilities Education Act to provide full Federal funding of such part.

S. 2196

At the request of Mrs. CLINTON, the name of the Senator from Washington (Ms. CANTWELL) was added as a cosponsor of S. 2196, a bill to authorize the Secretary of Energy to establish the position of Assistant Secretary for Advanced Energy Research, Technology Development, and Deployment to implement an innovative energy research, technology development, and deployment program.

STATEMENTS ON INTRODUCED BILLS AND JOINT RESOLUTIONS

By Mr. DOMENICI (for himself, Mr. BINGAMAN, Mr. ALEXANDER,

Ms. MIKULSKI, Mr. LUGAR, Mr. DODD, Mr. HATCH, Mr. OBAMA, Mr. WARNER, Mr. LIEBERMAN, Mr. BOND, Mrs. MURRAY, Mr. BURNS, Mr. BAYH, Mr. CRAIG, Ms. CANTWELL, Mrs. HUTCHISON, Mr. MENENDEZ, Mr. DEWINE, Mr. KOHL, Mr. THOMAS, Mr. KERRY, Mr. SMITH, Mr. NELSON of Florida, Mr. VOINOVICH, Mr. LEAHY, Mr. ALLEN, Mr. AKAKA, Mr. TALENT, Mrs. CLINTON, Mr. CHAMBLISS, Ms. STABENOW, Mr. CORNYN, Mr. DAYTON, Mr. COLEMAN, Mr. SALAZAR, Mr. MARTINEZ, Mr. INOUE, Mr. STEVENS, Mr. BIDEN, Mr. COCHRAN, Mr. HAGEL, Ms. MURKOWSKI, Mr. PRYOR, Ms. COLLINS, Mr. VITTER, and Ms. LANDRIEU):

S. 2197. A bill to improve the global competitiveness of the United States in science and energy technology, to strengthen basic research programs at the Department of Energy, and to provide support for mathematics and science education at all levels through the resources available through the Department of Energy, including at the National Laboratories; to the Committee on Energy and Natural Resources.

By Mr. DOMENICI (for himself, Mr. BINGAMAN, Mr. ALEXANDER, Ms. MIKULSKI, Mr. LUGAR, Mr. DODD, Mr. OBAMA, Mr. WARNER, Mr. LIEBERMAN, Mr. BOND, Mrs. MURRAY, Mr. BURNS, Mr. BAYH, Mr. CRAIG, Ms. CANTWELL, Mrs. HUTCHISON, Mr. MENENDEZ, Mr. DEWINE, Mr. KOHL, Mr. THOMAS, Mr. KERRY, Mr. SMITH, Mr. NELSON of Florida, Mr. VOINOVICH, Mr. LEAHY, Mr. ALLEN, Mr. AKAKA, Mr. TALENT, Mr. CHAMBLISS, Mr. CORNYN, Mr. DAYTON, Mr. COLEMAN, Mr. SALAZAR, Mr. MARTINEZ, Mr. INOUE, Mr. STEVENS, Mr. BIDEN, Mr. COCHRAN, Mr. HAGEL, Ms. MURKOWSKI, Mr. PRYOR, Mr. ENZI, Ms. COLLINS, Mr. VITTER, and Ms. LANDRIEU):

S. 2198. A bill to ensure the United States successfully competes in the 21st century global economy; to the Committee on Health, Education, Labor, and Pensions.

By Mr. DOMENICI (for himself, Mr. BINGAMAN, Mr. ALEXANDER, Ms. MIKULSKI, Mr. LUGAR, Mr. DODD, Mr. WARNER, Mr. OBAMA, Mr. BOND, Mr. LIEBERMAN, Mr. BURNS, Mrs. MURRAY, Mr. CRAIG, Mr. BAYH, Mrs. HUTCHISON, Ms. CANTWELL, Mr. DEWINE, Mr. MENENDEZ, Mr. THOMAS, Mr. KOHL, Mr. SMITH, Mr. KERRY, Mr. VOINOVICH, Mr. NELSON of Florida, Mr. ALLEN, Mr. LEAHY, Mr. TALENT, Mr. AKAKA, Mr. CHAMBLISS, Mrs. CLINTON, Mr. CORNYN, Ms. STABENOW, Mr. COLEMAN, Mr. DAYTON, Mr. MARTINEZ, Mr. SALAZAR, Mr. INOUE, Mr. STE-

VENS, Mr. BIDEN, Mr. COCHRAN, Mr. HAGEL, Ms. MURKOWSKI, Mr. PRYOR, Ms. COLLINS, Mr. VITTER, and Ms. LANDRIEU):

S. 2199. A bill to amend the Internal Revenue Code of 1986 to provide tax incentives to promote research and development, innovation, and continuing education; to the Committee on Finance.

Mr. DOMENICI. Mr. President, I rise today to introduce a legislative package which we refer to as the "Protecting America's Competitive Edge Act of 2006" or the "PACE" Act. This legislation ensures that the United States continues to set the pace in science, and in the development of new technologies.

I know my colleagues Senator BINGAMAN, Senator ALEXANDER, and Senator MIKULSKI share my conviction that this legislation addresses one of the most pressing challenges before us today. There are troubling signs that the United States is becoming less competitive in scientific and high-technology fields. Today, the United States is a net importer of high technology products. The U.S. share of global high-technology exports has fallen over the last two decades from 30 percent to only 17 percent.

The PACE legislation closely follows the recommendations made in a recent National Academy of Sciences report entitled "Rising Above the Gathering Storm." The metaphorical storm is the challenge to our global competitiveness in science and technology. I want to congratulate Norm Augustine, who chaired the National Academy committee, and the members of his committee for producing such a comprehensive, ground-breaking report on this important issue.

The Augustine report makes 20 recommendations for U.S. schools, universities, research and economic policy. Our legislation will enact each of the recommendations. For example, our legislation doubles authorizations for basic research in the physical sciences by over the next 7 years. It also requires that at least 8 percent of Federal research budgets are allocated to high-risk, potentially high pay-off research. It will strengthen the skills of thousands of math and science teachers by establishing training and education programs at summer institutes hosted at the National Laboratories.

We need to take U.S. competitiveness seriously. We need to take action to support our standard of living, and ensure we continue to grow and prosper. If we do not, we can expect other nations to rival our global competitiveness—and one day to surpass us.

I ask unanimous consent that the text of all three bills in the following order, the PACE-Energy Act, the PACE-Education Act, and the PACE-Finance Act, be printed in the RECORD.

S. 2197

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Protecting America’s Competitive Edge Through Energy Act of 2006” or the “PACE-Energy Act”.

SEC. 2. MATHEMATICS, SCIENCE, AND ENGINEERING EDUCATION AT THE DEPARTMENT OF ENERGY.

(a) SCIENCE EDUCATION PROGRAMS.—Section 3164 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a) is amended—

(1) by redesignating subsections (b) through (d) as subsections (c) through (e), respectively;

(2) by inserting after subsection (a) the following:

“(b) ORGANIZATION OF MATHEMATICS, SCIENCE, AND ENGINEERING EDUCATION PROGRAMS.—

“(1) DIRECTOR OF MATHEMATICS, SCIENCE AND ENGINEERING EDUCATION.—The Secretary, acting through the Under Secretary for Science (referred to in this subsection as the ‘Under Secretary’), shall appoint a Director of Mathematics, Science, and Engineering Education (referred to in this subsection as the ‘Director’) with the principal responsibility for administering mathematics, science, and engineering education programs of the Department.

“(2) QUALIFICATIONS.—The Director shall be an individual, who by reason of professional background and experience, is specially qualified to advise the Under Secretary on all matters pertaining to mathematics, science, and engineering education at the Department.

“(3) DUTIES.—The Director shall—

“(A) oversee all mathematics, science, and engineering education programs of the Department;

“(B) represent the Department as the principal interagency liaison for all mathematics, science, and engineering education programs, unless otherwise represented by the Secretary or the Under Secretary;

“(C) prepare the annual budget and advise the Under Secretary on all budgetary issues for mathematics, science, and engineering education programs of the Department; and

“(D) perform other such matters related to mathematics, science, and engineering education as are required by the Secretary or the Under Secretary.

“(4) STAFF AND OTHER RESOURCES.—The Secretary shall assign to the Director such personnel and other resources as the Secretary considers necessary to permit the Director to carry out the duties of the Director.

“(5) ASSESSMENT.—The Secretary shall offer to enter into a contract with the National Academy of Sciences under which the National Academy, not later than 5 years after, and not later than 10 years after, the date of enactment of this paragraph, shall assess the performance of the mathematics, science, and engineering education programs of the Department.

“(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this subsection.”; and

(3) by striking subsection (d) (as redesignated by paragraph (1)) and inserting the following:

“(d) MATHEMATICS, SCIENCE, AND ENGINEERING EDUCATION FUND.—The Secretary shall establish a Mathematics, Science, and Engineering Education Fund, using not less than 0.3 percent of the amount made available to the Department for research, development, demonstration, and commercial application for each fiscal year, to carry out sections 3165, 3166, and 3167.”.

(b) DEFINITION.—Section 3168 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381d) is amended by adding at the end the following:

“(5) NATIONAL LABORATORY.—The term ‘National Laboratory’ has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).”.

(c) MATHEMATICS, SCIENCE, AND ENGINEERING EDUCATION PROGRAMS.—The Department of Energy Science Education Enhancement Act (42 U.S.C. 7381 et seq.) is amended—

(1) by inserting after section 3162 the following:

“Subpart A—Science Education Enhancement”;

(2) in section 3169, by striking “part” and inserting “subpart”; and

(3) by adding at the end the following:

“Subpart B—Mathematics, Science, and Engineering Education Programs

“SEC. 3170. DEFINITIONS.

“In this subpart:

“(1) DIRECTOR.—The term ‘Director’ means the Director of Mathematics, Science, and Engineering Education.

“(2) NATIONAL LABORATORY.—The term ‘National Laboratory’ has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

“CHAPTER 1—ASSISTANCE FOR SPECIALTY SCHOOLS FOR MATHEMATICS AND SCIENCE

“SEC. 3171. ASSISTANCE FOR SPECIALTY SCHOOLS FOR MATHEMATICS AND SCIENCE.

“(a) IN GENERAL.—Consistent with sections 3165 and 3166, the Director shall make available necessary funds for a program using scientific and engineering staff of the National Laboratories, in which the staff—

“(1) assists teaching courses at statewide specialty secondary schools that provide comprehensive mathematics and science (including engineering) education; and

“(2) uses National Laboratory scientific equipment in the teaching of the courses.

“(b) REPORT TO CONGRESS.—Not later than 2 years after the date of enactment of the Protecting America’s Competitive Edge Through Energy Act of 2006, the Director shall submit a report to the appropriate committees of Congress detailing the impact of the activities assisted with funds made available under this section.

“CHAPTER 2—EXPERIENTIAL-BASED LEARNING OPPORTUNITIES

“SEC. 3175. EXPERIENTIAL-BASED LEARNING OPPORTUNITIES.

“(a) INTERNSHIPS AUTHORIZED.—From the amounts authorized under subsection (d), the Secretary, acting through the Director, shall establish a summer internship program for middle school and secondary school students that shall—

“(1) provide the students with internships at the National Laboratories; and

“(2) promote experiential, hands-on learning in mathematics or science.

“(b) ELIGIBILITY CRITERIA.—The Director shall establish criteria to determine the sufficient level of academic preparedness necessary for a student to be eligible for an internship under this section.

“(c) PRIORITY.—

“(1) IN GENERAL.—The Director shall give priority for an internship under this section to a student who meets the eligibility criteria described in subsection (b) and who attends a school—

“(A)(i) in which not less than 40 percent of the children enrolled in the school are from low-income families; or

“(ii) that is designated with a school locale code of 7 or 8, as determined by the Secretary of Education; and

“(B) for which there is—

“(i) a high percentage of teachers who are not teaching in the academic subject areas or grade levels in which the teachers were trained to teach;

“(ii) a high teacher turnover rate; or

“(iii) a high percentage of teachers with emergency, provisional, or temporary certification or licenses.

“(2) COORDINATION.—The Director shall consult with the Secretary of Education in order to determine whether a student meets the priority requirements of this subsection.

“(d) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section \$50,000,000 for each of the fiscal years 2007 through 2013.

“CHAPTER 3—NATIONAL LABORATORIES CENTERS OF EXCELLENCE IN MATHEMATICS AND SCIENCE EDUCATION

“SEC. 3181. NATIONAL LABORATORIES CENTERS OF EXCELLENCE IN MATHEMATICS AND SCIENCE EDUCATION.

“(a) IN GENERAL.—The Secretary shall establish at each of the National Laboratories a program to support a Center of Excellence in Mathematics and Science at 1 public secondary school located in the region of the National Laboratory to provide assistance in accordance with subsection (c).

“(b) GOALS.—The Secretary shall establish goals and performance assessments for each Center of Excellence authorized under subsection (a).

“(c) ASSISTANCE.—Consistent with sections 3165 and 3166, the Director shall make available necessary funds for a program using scientific and engineering staff of the National Laboratories, during which the staff—

“(1) assists teaching courses at the Centers of Excellence in Mathematics and Science; and

“(2) uses National Laboratory scientific equipment in the teaching of the courses.

“(d) EVALUATION.—The Secretary shall consider the results of the performance assessments required under subsection (b) in any performance review of a National Laboratories management and operations contractor.

“CHAPTER 4—SUMMER INSTITUTES

“SEC. 3185. SUMMER INSTITUTES.

“(a) DEFINITION OF SUMMER INSTITUTE.—In this section, the term ‘summer institute’ means an institute at a National Laboratory, conducted during the summer, that—

“(1) is conducted for a period of not less than 2 weeks;

“(2) includes, as a component, a program that provides direct interaction between students and faculty; and

“(3) provides for follow-up training during the academic year.

“(b) SUMMER INSTITUTE PROGRAMS AUTHORIZED.—The Secretary, acting through the Director, shall establish or expand program of summer institutes at each of the National Laboratories to provide additional training to strengthen the mathematics and science teaching skills of teachers employed at public schools in kindergarten through grade 12 education, with a particular focus on teachers of kindergarten through grade 8.

“CHAPTER 5—DISTINGUISHED SCIENTIST PROGRAM

“SEC. 3191. DISTINGUISHED SCIENTIST PROGRAM.

“(a) PURPOSE.—The purpose of this section is to promote scientific and academic excellence at National Laboratories.

“(b) ESTABLISHMENT.—The Secretary, acting through the Director and in consultation with the Director of the Office of Science, shall establish a program to support the appointment of distinguished scientists by National Laboratories.

“(c) QUALIFICATIONS.—Successful candidates under this section shall be persons who, by reason of professional background and experience, are able to bring international recognition to the appointing National Laboratory in their field of scientific endeavor.

“(d) SELECTION.—A distinguished scientist appointed under this section shall be selected through an open peer review process.

“(e) APPOINTMENT.—An appointment by a National Laboratory under this section shall be at the rank of the highest grade of distinguished scientist or technical staff of the National Laboratory.

“(f) DURATION.—An appointment under this section shall be for 6 years, consisting of 2 3-year funding allotments.

“(g) USE OF FUNDS.—Funds made available under this section may be used for—

- “(1) the salary of the distinguished scientist and support staff;
- “(2) undergraduate, graduate, and postdoctoral appointments;
- “(3) research-related equipment;
- “(4) professional travel; and
- “(5) such other requirements as the Director determines are necessary to carry out the purpose of the program.

“(h) REVIEW.—

“(1) IN GENERAL.—The appointment of a distinguished scientist under this section shall be reviewed at the end of the first 3-year allotment for the distinguished scientist through an open peer review process to determine if the appointment is meeting the purpose of this section under subsection (a).

“(2) FUNDING.—Funding of the appointment of the distinguished scientist for the second 3-year allotment shall be determined based on the review conducted under paragraph (1).”

SEC. 3. DEPARTMENT OF ENERGY EARLY-CAREER RESEARCH GRANTS.

(a) PURPOSE.—It is the purpose of this section to authorize research grants in the Department of Energy for early-career scientists and engineers for purposes of pursuing independent research.

(b) DEFINITION OF ELIGIBLE EARLY-CAREER RESEARCHER.—In this section, the term “eligible early-career researcher” means an individual who—

- (1) completed a doctorate or other terminal degree not more than 10 years before the date of enactment of this Act and has demonstrated promise in the field of science, technology, engineering, or mathematics; or
- (2) has an equivalent professional qualification in the field of science, technology, engineering, or mathematics.

(c) GRANT PROGRAM AUTHORIZED.—

(1) IN GENERAL.—The Secretary of Energy, through the Director of the Office of Science of the Department of Energy, shall award not less than 65 grants per year to outstanding eligible early-career researchers to support the work of such researchers in the Department, particularly the National Laboratories, or other federally-funded research and development centers.

(2) APPLICATION.—An eligible early-career researcher who desires to receive a grant under this section shall submit to the Secretary of Energy an application at such time, in such manner, and accompanied by such information as the Secretary may require.

(3) SPECIAL CONSIDERATION.—In awarding grants under this section, the Secretary of Energy shall give special consideration to eligible early-career researchers who have followed alternative career paths such as working part-time or in non-academic settings, or who have taken a significant career break or other leave of absence.

(4) DURATION AND AMOUNT.—A grant under this section shall be 5 years in duration. An eligible early career-researcher who receives a grant under this section shall receive \$100,000 for each year of the grant period.

(5) USE OF FUNDS.—An eligible early career-researcher who receives a grant under this section shall use the grant funds for basic re-

search in natural sciences, engineering, mathematics, or computer sciences at the Department of Energy, particularly the National Laboratories, or other federally-funded research and development center.

(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

- (A) \$6,500,000 for fiscal year 2007;
- (B) \$13,000,000 for fiscal year 2008;
- (C) \$19,500,000 for fiscal year 2009;
- (D) \$26,000,000 for fiscal year 2010; and
- (E) \$32,500,000 for fiscal year 2011.

SEC. 4. ADVANCED RESEARCH PROJECTS AUTHORITY-ENERGY.

(a) DEFINITIONS.—In this section:

(1) ARPA-E.—The term “ARPA-E” means the Advanced Research Projects Authority-Energy established under subsection (b).

(2) FUND.—The term “Fund” means the Acceleration Fund for Research and Development of Energy Technologies established under subsection (c).

(3) SECRETARY.—The term “Secretary” means the Secretary of Energy.

(4) UNDER SECRETARY.—The term “Under Secretary” means the position of Under Secretary for Science established under section 202(b) of the Department of Energy Organization Act (42 U.S.C. 7132(b)).

(b) ARPA-E.—

(1) ESTABLISHMENT.—There is established the Advanced Research Projects Authority-Energy.

(2) DIRECTOR.—ARPA-E shall be headed by a Director, who shall be appointed by the Secretary and report to the Under Secretary.

(3) RESPONSIBILITIES.—The Director shall use the Fund to award competitive, merit-based grants, cooperative agreements, and contracts to public or private entities (including businesses, federally funded research and development centers, and institutions of higher education) to—

(A) support basic and applied energy research to promote revolutionary changes in technologies that would promote the missions of the Department of Energy;

(B) advance the development, testing, evaluation, and deployment of critical energy technologies; and

(C) accelerate prototyping and development of technologies that would address national energy priorities.

(4) TARGETED COMPETITIONS.—The Director may solicit proposals to address areas of national need in science and energy technology, as identified by the Director.

(5) COORDINATION.—The Director—

(A) shall ensure that the activities of ARPA-E are coordinated with activities of other appropriate research agencies; and

(B) may carry out projects under this section jointly with other agencies.

(6) PERSONNEL.—

(A) IN GENERAL.—In hiring personnel for ARPA-E, the Secretary shall have the hiring and management authorities described in section 1101 of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Public Law 105-261; 5 U.S.C. 3104 note).

(B) TERM.—The term of appointments for an employee under subparagraph (A) may not exceed 5 years, except that the Secretary may renew the term of appointment of the employee for an additional term of 5 years.

(7) DEMONSTRATIONS.—The Director shall periodically hold energy technology demonstrations to improve contact among technology developers, vendors, and acquisition personnel.

(c) FUND.—

(1) ESTABLISHMENT.—There is established in the Treasury of the United States a revolving fund, to be known as the “Acceleration Fund for Research and Development of Energy Technologies”, consisting of—

(A) such amounts as are appropriated to the Fund under paragraph (5); and

(B) any interest earned on investment of amounts in the Fund under paragraph (3).

(2) EXPENDITURES FROM FUND.—

(A) IN GENERAL.—Subject to subparagraph (B), on request by the Director, the Secretary of the Treasury shall transfer from the Fund to the Director such amounts as the Director determines are necessary to carry out this section.

(B) ADMINISTRATIVE EXPENSES.—An amount not exceeding 5 percent of the amounts in the Fund shall be available for each fiscal year to pay the administrative expenses necessary to carry out this section.

(3) INVESTMENT OF AMOUNTS.—

(A) IN GENERAL.—The Secretary of the Treasury shall invest such portion of the Fund as is not, in the judgment of the Secretary of the Treasury, required to meet current withdrawals.

(B) INTEREST-BEARING OBLIGATIONS.—Investments may be made only in interest-bearing obligations of the United States.

(C) ACQUISITION OF OBLIGATIONS.—For the purpose of investments under subparagraph (A), obligations may be acquired—

- (i) on original issue at the issue price; or
- (ii) by purchase of outstanding obligations at the market price.

(D) SALE OF OBLIGATIONS.—Any obligation acquired by the Fund may be sold by the Secretary of the Treasury at the market price.

(E) CREDITS TO FUND.—The interest on, and the proceeds from the sale or redemption of, any obligations held in the Fund shall be credited to, and form a part of, the Fund.

(4) TRANSFERS OF AMOUNTS.—

(A) IN GENERAL.—The amounts required to be transferred to the Fund under this subsection shall be transferred at least monthly from the general fund of the Treasury to the Fund on the basis of estimates made by the Secretary of the Treasury.

(B) ADJUSTMENTS.—Proper adjustment shall be made in amounts subsequently transferred to the extent prior estimates were in excess of or less than the amounts required to be transferred.

(5) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Fund—

- (A) \$300,000,000 for fiscal year 2007;
- (B) \$500,000,000 for fiscal year 2008;
- (C) \$700,000,000 for fiscal year 2009;
- (D) \$900,000,000 for fiscal year 2010; and
- (E) \$1,000,000,000 for fiscal year 2011.

SEC. 5. AUTHORIZATION OF APPROPRIATIONS FOR THE DEPARTMENT OF ENERGY FOR BASIC RESEARCH.

Section 971(b) of the Energy Policy Act of 2005 (42 U.S.C. 16311(b)) is amended—

(1) in paragraph (2), by striking “and” at the end;

(2) in paragraph (3), by striking the period at the end and inserting a semicolon; and

(3) by adding at the end the following:

- “(4) \$5,320,000,000 for fiscal year 2010;
- “(5) \$5,851,000,000 for fiscal year 2011;
- “(6) \$6,436,000,000 for fiscal year 2012; and
- “(7) \$7,080,000,000 for fiscal year 2013.”.

S. 2198

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

(a) SHORT TITLE.—This Act may be cited as the “Protecting America’s Competitive Edge Through Education and Research Act of 2006” or the “PACE-Education Act”.

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title.

TITLE I—10,000 TEACHERS, 10,000,000 MINDS K-12 MATHEMATICS AND SCIENCE EDUCATION

Subtitle A—Education

Sec. 111. Definitions.

CHAPTER 1—MATH AND SCIENCE TEACHERS

Sec. 121. Baccalaureate degrees in mathematics and science with teacher certification.

Sec. 122. Master's degrees in mathematics and science education for teachers.

CHAPTER 2—NATIONAL SCIENCE FOUNDATION SCHOLARSHIPS AND FELLOWSHIPS

SUBCHAPTER A—NATIONAL SCIENCE FOUNDATION SCHOLARSHIPS FOR MATHEMATICS AND SCIENCE TEACHERS

Sec. 131. Purpose.

Sec. 132. Recruiting and training new mathematics and science teachers.

SUBCHAPTER B—NATIONAL SCIENCE FOUNDATION FELLOWSHIPS FOR MATHEMATICS AND SCIENCE TEACHERS

Sec. 141. National Science Foundation fellowships for mathematics and science teachers.

CHAPTER 3—ADVANCED PLACEMENT AND INTERNATIONAL BACCALAUREATE PROGRAMS

Sec. 151. Advanced Placement and International Baccalaureate Programs.

CHAPTER 4—NATIONAL CLEARINGHOUSE ON MATHEMATICS AND SCIENCE TEACHING MATERIALS

Sec. 161. National clearinghouse on mathematics and science teaching materials.

CHAPTER 5—FUTURE AMERICAN-SCIENTIST SCHOLARSHIPS

Sec. 171. Future American-Scientist Scholarships.

CHAPTER 6—GRADUATE RESEARCH FELLOWSHIPS

Sec. 181. Graduate Research Fellowships in scientific areas of national need.

Subtitle B—National Science Foundation Early-Career Research Grants

Sec. 191. National Science Foundation early-career research grants.

TITLE II—SOWING THE SEEDS THROUGH SCIENCE AND ENGINEERING RESEARCH

Subtitle A—Office of Science and Technology Policy Matters

Sec. 211. Coordination of science, mathematics, and engineering education programs.

Sec. 212. National Coordination Office for Advanced Research Instrumentation and Facilities.

Sec. 213. High-risk, high-payoff research.

Sec. 214. President's Innovation Award.

Subtitle B—National Aeronautics and Space Administration Matters

Sec. 221. National Aeronautics and Space Administration early-career research grants.

Sec. 222. Authorization of appropriations for the National Aeronautics and Space Administration for basic sciences.

Subtitle C—Communications Matters

Sec. 231. Sense of Senate on policies to accelerate deployment of access to broadband Internet.

Subtitle D—Science Parks

Sec. 241. Development of science parks.

Subtitle E—Authorization of Appropriations for the National Science Foundation for Research and Related Activities

Sec. 251. Authorization of appropriations for the National Science Foundation for research and related activities.

TITLE III—ENSURING THE BEST AND BRIGHTEST REMAIN IN THE UNITED STATES

Subtitle A—Visas for Doctorate Students in Mathematics, Engineering, Technology, or the Physical Sciences

Sec. 311. Findings.

Sec. 312. Sense of the Senate.

Sec. 313. Visas for doctorate students in mathematics, engineering, technology, or the physical sciences.

Sec. 314. Aliens not subject to numerical limitations on employment-based immigrants.

Subtitle B—Patent Reform

Sec. 321. Patent reform.

TITLE IV—REFORMING DEEMED EXPORTS

Sec. 401. Sense of Senate on exemption of certain uses of technology from treatment as exports.

TITLE V—STRENGTHENING BASIC RESEARCH AT THE DEPARTMENT OF DEFENSE

Sec. 501. Department of Defense early-career research grants.

Sec. 502. Authorization of appropriations for the Department of Defense for basic research.

TITLE I—10,000 TEACHERS, 10,000,000 MINDS K-12 MATHEMATICS AND SCIENCE EDUCATION

Subtitle A—Education

SEC. 111. DEFINITIONS.

Unless otherwise specified in this subtitle, the terms used in this subtitle have the meanings given the terms in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

CHAPTER 1—MATH AND SCIENCE TEACHERS

SEC. 121. BACCALAUREATE DEGREES IN MATHEMATICS AND SCIENCE WITH TEACHER CERTIFICATION.

(a) **GRANTS AUTHORIZED.**—From the amounts authorized under subsection (g), the Secretary shall award grants to eligible recipients to enable the eligible recipients to provide integrated courses of study in mathematics, science, or engineering and teacher education, that lead to a baccalaureate degree in mathematics, science, or engineering with concurrent teacher certification.

(b) **DEFINITION OF ELIGIBLE RECIPIENT.**—In this section, the term “eligible recipient” means any department of mathematics, science, or engineering of an institution of higher education.

(c) **AWARD AND DURATION.**—

(1) **AWARD.**—The Secretary shall award a grant under this section to each eligible recipient that collaborates with a teacher preparation program at an institution of higher education to develop undergraduate degrees in mathematics, science, or engineering with pedagogy education and teacher certification.

(2) **DURATION.**—The Secretary shall award a grant under this section to each eligible recipient in an amount that is not more than \$1,000,000 per year for a period of 5 years.

(d) **MATCHING REQUIREMENT.**—Each eligible recipient receiving a grant under this section shall provide, from non-Federal sources (provided in cash or in kind), to carry out the activities supported by the grant, an amount

that is not less than 25 percent of the amount of the grant for the first year of the grant, not less than 35 percent of the amount of the grant for the second year of the grant, and not less than 50 percent of the amount of the grant for each succeeding fiscal year of the grant.

(e) **APPLICATION.**—

(1) **IN GENERAL.**—Each eligible recipient desiring a grant under this section shall submit an application to the Secretary at such time, in such manner, and accompanied by such information as the Secretary may require.

(2) **CONTENTS.**—Each application submitted pursuant to paragraph (1) shall include—

(A) a description of how the eligible recipient will use grant funds to develop and administer undergraduate degrees in mathematics, science, or engineering with pedagogy education and teacher certification, including a description of proposed high-quality research and laboratory experiences that will be available to students;

(B) a description of how the mathematics, science, or engineering departments will coordinate with a teacher preparation program to carry out the activities authorized under this section;

(C) a resource assessment that describes the resources available to the eligible recipient, the intended use of the grant funds, and the commitment of the resources of the eligible recipient to the activities assisted under this section, including financial support, faculty participation, time commitments, and continuation of the activities assisted under the grant when the grant period ends;

(D) an evaluation plan, including measurable objectives and benchmarks for—

(i) improving student retention;

(ii) increasing the percentage of highly qualified mathematics and science teachers; and

(iii) improving kindergarten through grade 12 student academic performance in mathematics and science;

(E) a description of the activities the eligible recipient will conduct to ensure graduates of the program keep informed of the latest developments in the respective fields;

(F) a description of how the eligible recipient will work with local educational agencies in the area in which the eligible recipient is located and, to the extent practicable, with local educational agencies where graduates of the program authorized under this section are employed, to ensure that the activities required under subsection (f)(3) are carried out; and

(G) a description of efforts to encourage applications to the program from underrepresented groups, including women and minority groups.

(f) **AUTHORIZED ACTIVITIES.**—An eligible recipient shall use the funds received under this section—

(1) to develop and administer teacher education and certification programs with in-depth content education and subject-specific education in pedagogy, leading to baccalaureate degrees in mathematics, science, or engineering with concurrent teacher certification;

(2) to offer high-quality research experiences and training in the use of educational technology; and

(3) to work with local educational agencies in the area in which the eligible recipient is located and, to the extent practicable, with local educational agencies where graduates of the program authorized under this section are employed, to support the new teachers during the initial years of teaching, which may include—

(A) promoting effective teaching skills;

(B) development of skills in educational interventions based on scientifically-based research;

(C) providing opportunities for high-quality teacher mentoring;

(D) providing opportunities for regular professional development;

(E) interdisciplinary collaboration among exemplary teachers, faculty, researchers, and other staff who prepare new teachers; and

(F) allowing time for joint lesson planning and other constructive collaborative activities.

(g) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to carry out this section—

- (1) \$30,000,000 for fiscal year 2007;
- (2) \$90,000,000 for fiscal year 2008;
- (3) \$190,000,000 for fiscal year 2009;
- (4) \$290,000,000 for fiscal year 2010;
- (5) \$390,000,000 for fiscal year 2011;
- (6) \$500,000,000 for fiscal year 2012; and
- (7) \$500,000,000 for fiscal year 2013.

SEC. 122. MASTER'S DEGREES IN MATHEMATICS AND SCIENCE EDUCATION FOR TEACHERS.

(a) **PURPOSES.**—The purpose of this section is provide competitive institutional grants for eligible recipients to develop part-time, 3-year master's degree programs in mathematics and science education for teachers in order to enhance the content knowledge and pedagogical skills of teachers.

(b) **DEFINITION OF ELIGIBLE RECIPIENT.**—In this section, the term “eligible recipient” means a mathematics, science, or engineering department of an institution of higher education.

(c) **GRANTS AUTHORIZED.**—

(1) **GRANTS TO ELIGIBLE RECIPIENTS.**—From the amounts authorized under subsection (i), the Secretary is authorized to award grants of not more than \$1,000,000, on a competitive basis, to eligible recipients to enable the eligible recipients to carry out the authorized activities described in subsection (f).

(2) **QUALIFICATION.**—In order to qualify for a grant under this section, an eligible recipient shall collaborate with a teacher preparation program of an institution of higher education.

(d) **APPLICATION.**—To be eligible to receive a grant under this section, an eligible recipient shall submit an application to the Secretary that—

- (1) meets the requirements of this section;
- (2) includes a description of how the eligible recipient intends to use the grant funds provided under this section;
- (3) contains such information and assurances as the Secretary may require;
- (4) describes how the eligible recipient will prepare teachers to become more effective mathematics or science teachers;
- (5) describes how the eligible recipient will coordinate with a teacher preparation program, and how the activities of the eligible recipient will be consistent with State, local, and other education reform activities that promote student achievement;
- (6) describes the resources available to the eligible recipient, the intended use of the grant funds, and the commitment of resources of the eligible recipient to the activities assisted under this section, including financial support, faculty participation, time commitments, and continuation of the activities when the grant period ends;
- (7) provides an evaluation plan pursuant to subsection (g);
- (8) describes how the eligible recipient will align the proposed master's degree program with challenging student academic achievement standards, and challenging academic content standards, established by the State in which the eligible recipient is located;
- (9) describes the activities the eligible recipient will undertake to ensure that local

educational agencies in the geographic areas served by the eligible recipient are provided information about the activities carried out with grant funds under this section; and

(10) describes how the eligible recipient will encourage applications to the program from underrepresented groups, including women and minority groups.

(e) **PRIORITY.**—The Secretary may give priority consideration to applications that demonstrate that the eligible recipient shall—

(1) consult with local educational agencies in developing and administering master's degree programs;

(2) use online technology to allow for flexibility in the pace at which candidates complete the master's degree programs; and

(3) develop innovative efforts aimed at reducing the shortage of master's degree level mathematics or science teachers in low-income urban or rural areas.

(f) **AUTHORIZED ACTIVITIES.**—An eligible recipient shall use the grant funds received under this section to develop part-time, 3-year master's degree programs in mathematics and science education for teachers, conducted over 3 full-time summer sessions, and alternate weekends during the academic year, as appropriate, which shall include—

- (1) developing courses that—
 - (A) are based on rigorous mathematics and science content and aligned with challenging State academic content standards;
 - (B) promote effective teaching skills; and
 - (C) promote understanding of effective instructional strategies for students with special needs, including students with disabilities, students who are limited English proficient, and students who are gifted and talented;
- (2) hiring and training professional staff to administer the program;
- (3) purchasing equipment for computer and teaching aids;
- (4) providing educational instruction for not fewer than 20 teachers per year;
- (5) providing stipends to help support the participants in the form of tuition reimbursement and travel expenses; and
- (6) creating opportunities for clinical experience and training for teachers through participation with professionals in business, research, and work environments relating to mathematics, science, or engineering, including opportunities for using laboratory equipment.

(g) **ANNUAL EVALUATION.**—Each eligible recipient shall establish and include in the application submitted pursuant to section (d) an evaluation plan that includes strong performance objectives. The plan shall include objectives and measures for increasing—

- (1) the percentage of master's degree level mathematics or science teachers hired by the State in which the eligible recipient is located;
- (2) teacher retention;
- (3) the percentage of master's degree level mathematics or science teachers serving in high-need schools;
- (4) the percentage of master's degree level mathematics or science teachers among underrepresented groups; and
- (5) the competencies of program graduates in their respective fields of mathematics or science.

(h) **GRADUATE FELLOWSHIPS.**—An individual who has received a master's degree in mathematics or science education under a program developed pursuant to this section and who meets the requirements of section 141(b)(2) shall be eligible for a fellowship authorized under such section 141(b)(2).

(i) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to carry out this section—

- (1) \$200,000,000 for fiscal year 2007;
- (2) \$500,000,000 for fiscal year 2008;

- (3) \$500,000,000 for fiscal year 2009;
- (4) \$500,000,000 for fiscal year 2010;
- (5) \$500,000,000 for fiscal year 2011;
- (6) \$500,000,000 for fiscal year 2012; and
- (7) \$500,000,000 for fiscal year 2013.

CHAPTER 2—NATIONAL SCIENCE FOUNDATION SCHOLARSHIPS AND FELLOWSHIPS

Subchapter A—National Science Foundation Scholarships for Mathematics and Science Teachers

SEC. 131. PURPOSE.

The purpose of this subchapter is to annually recruit and train 10,000 new mathematics and science teachers by providing scholarships for undergraduate courses of study leading to baccalaureate degrees in mathematics, science, or engineering, with concurrent teacher certification.

SEC. 132. RECRUITING AND TRAINING NEW MATHEMATICS AND SCIENCE TEACHERS.

(a) **GRANTS AUTHORIZED.**—From the amounts authorized under subsection (g), the Director of the National Science Foundation (referred to in this section as the “Director”) shall award merit-based undergraduate scholarships to eligible students to assist the eligible students in paying their college education expenses, which shall include tuition, fees, books, supplies, and equipment required for courses of instruction.

(b) **DEFINITION OF ELIGIBLE STUDENT.**—In this section, the term “eligible student” means a student who—

- (1) attends an institution of higher education;
- (2) is majoring in mathematics, science, or engineering;
- (3) is pursuing concurrent certification in teaching; and
- (4) demonstrates continued academic achievement and progress, as determined by the Director, toward completion of a baccalaureate degree in mathematics, science, or engineering with concurrent certification in teaching.

(c) **AWARDS.**—The Director shall award a scholarship under this section to an eligible student in an amount that is not greater than \$20,000 per academic year for not more than 4 years of undergraduate study. The amount awarded for each academic year shall not exceed the student's cost of attendance for the academic year.

(d) **SERVICE REQUIREMENTS.**—

(1) **SERVICE REQUIREMENT.**—An individual who is awarded a scholarship under this section shall enter into an agreement with the Director under which the individual agrees to be employed for not less than 5 academic years as a full-time mathematics, science, or elementary school teacher in a public elementary school or secondary school, or 4 academic years as a full-time mathematics, science, or elementary school teacher in a public elementary school or secondary school—

(A)(i) in which not less than 40 percent of the children enrolled in the school are from low-income families; or

(ii) designated with a school locale code of 7 or 8, or otherwise designated as a rural school, as determined by the Secretary; and

(B)(i) in which there is a higher percentage of teachers not teaching in the academic subject areas or grade levels in which the teachers were trained to teach; or

(ii) in which there is a high teacher turnover rate or a high percentage of teachers with emergency, provisional, or temporary certification or licenses.

(2) **COORDINATION WITH THE SECRETARY OF EDUCATION.**—The Director shall coordinate with the Secretary to determine whether an individual who receives a scholarship award under this section is employed as a full-time

mathematics, science, or elementary school teacher in accordance with paragraphs (1), (3), and (4).

(3) **FAILURE TO COMPLY.**—If an individual who receives a scholarship award under this section fails to comply with the agreement entered into pursuant to paragraph (1), the Director shall take 1 or more of the following actions:

(A) Require the individual to repay all or the applicable portion of the total scholarship amount awarded to the individual under this section.

(B) Impose a fine or penalty in an amount to be determined by the Director.

(4) **REGULATIONS.**—The Director shall promulgate regulations setting forth the terms of repayment and the criteria to be considered in granting a waiver for the service requirements. Such criteria shall include whether compliance with the service requirements is inequitable and represents undue hardship.

(e) **COORDINATION WITH THE SECRETARY OF DEFENSE.**—The Director shall coordinate with the Secretary of Defense to ensure members of the Armed Forces are aware of the educational opportunity under this section, particularly members of the Armed Forces who have training in engineering.

(f) **FELLOWSHIPS.**—An individual shall be eligible for a fellowship under section 141(b)(1) if the individual—

(1) has received a baccalaureate degree in mathematics, science, or engineering, and concurrent certification in teaching;

(2) has received a scholarship award under this section; and

(3) meets the requirements of section 141(b)(1).

(g) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to carry out this section—

- (1) \$50,000,000 for fiscal year 2007;
- (2) \$100,000,000 for fiscal year 2008;
- (3) \$150,000,000 for fiscal year 2009;
- (4) \$170,000,000 for fiscal year 2010;
- (5) \$170,000,000 for fiscal year 2011;
- (6) \$170,000,000 for fiscal year 2012; and
- (7) \$170,000,000 for fiscal year 2013.

Subchapter B—National Science Foundation Fellowships for Mathematics and Science Teachers

SEC. 141. NATIONAL SCIENCE FOUNDATION FELLOWSHIPS FOR MATHEMATICS AND SCIENCE TEACHERS.

(a) **FELLOWSHIP AUTHORIZED.**—The Director of the National Science Foundation (referred to in this section as the “Director”) is authorized to award fellowships to individuals, as described in subsection (b), a portion of which shall be used for continuing education and professional development activities.

(b) **FELLOWSHIP AWARDS.**—The Director shall award the following fellowships:

(1) The Director shall award \$10,000 annually for 4 academic years to an individual who meets the following criteria:

(A) The individual has received a baccalaureate degree in mathematics, science, or engineering, and concurrent certification in teaching.

(B) The individual received a scholarship award under section 132.

(C) The individual is employed as a full-time mathematics, science, or elementary school teacher in a public elementary school or secondary school—

(i) (I) in which not less than 40 percent of the children enrolled in the school are from low-income families; or

(ii) (I) designated with a school locale code of 7 or 8, or otherwise designated as a rural school, as determined by the Secretary; and

(ii) (I) in which there is a high percentage of teachers not teaching in the academic subject areas or grade levels in which the teachers were trained to teach; or

(II) in which there is a high teacher turnover rate or a high percentage of teachers with emergency, provisional, or temporary certification or licenses.

(2) The Director shall award \$10,000 annually for 5 academic years to an individual who has received a master's degree in mathematics or science education under a program developed pursuant to section 122 and who undertakes increased responsibilities, such as teacher mentoring and other leadership activities.

(c) **APPLICATION.**—An individual desiring a fellowship under this section shall submit an application to the Director at such time, in such manner, and accompanied by such information as the Director may require. Each application shall include assurances that the individual meets the requirements of the fellowship for which the individual is applying.

(d) **COORDINATION.**—The Director shall coordinate with the Secretary to determine whether an individual who receives a fellowship under this section meets the requirements of this section.

(e) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated—

(1) to carry out subsection (b)(1)—

- (A) \$5,000,000 for fiscal year 2008;
- (B) \$15,000,000 for fiscal year 2009;
- (C) \$30,000,000 for fiscal year 2010;
- (D) \$45,000,000 for fiscal year 2011;
- (E) \$45,000,000 for fiscal year 2012; and
- (F) \$45,000,000 for fiscal year 2013; and

(2) to carry out subsection (b)(2)—

- (A) \$100,000,000 for fiscal year 2010;
- (B) \$200,000,000 for fiscal year 2011;
- (C) \$300,000,000 for fiscal year 2012; and
- (D) \$400,000,000 for fiscal year 2013.

CHAPTER 3—ADVANCED PLACEMENT AND INTERNATIONAL BACCALAUREATE PROGRAMS

SEC. 151. ADVANCED PLACEMENT AND INTERNATIONAL BACCALAUREATE PROGRAMS.

(a) **PURPOSE.**—The purposes of this section are—

(1) to educate an additional 70,000 Advanced Placement (AP) or International Baccalaureate (IB) and 80,000 pre-AP or pre-IB teachers of mathematics and science over the 5 year period beginning with 2007; and

(2) to triple to 1,500,000 the number of students who take AP and IB mathematics and science examinations.

(b) **GRANTS AUTHORIZED.**—

(1) **IN GENERAL.**—From the amounts authorized under subsection (i), the Secretary shall award grants, on a competitive basis, to eligible recipients to enable the eligible recipients to carry out the activities authorized in subsection (f).

(2) **LIMITATION.**—An eligible recipient may not receive more than 1 grant at a time under this section to undertake authorized activities within the same State.

(c) **DEFINITIONS.**—In this section:

(1) **ELIGIBLE RECIPIENT.**—The term “eligible recipient” means a nonprofit educational entity with expertise in Advanced Placement or International Baccalaureate services.

(2) **MASTER TEACHER.**—The term “master teacher” means a teacher—

(A) with an advanced degree or an advanced certification;

(B) who uses the most effective teaching methods in the teacher's disciplines; and

(C) who has shown demonstrable results of higher student achievement in mathematics or science.

(d) **APPLICATION.**—

(1) **IN GENERAL.**—Each eligible recipient desiring a grant under this section shall submit an application to the Secretary at such time, in such manner, and accompanied by such information as the Secretary may require.

(2) **CONTENTS.**—Each application submitted pursuant to paragraph (1) shall—

(A) describe the need for increased access to Advanced Placement or International Baccalaureate programs in mathematics and science;

(B) provide for the involvement of business and community organizations in the activities to be assisted;

(C) describe the availability of matching funds from non-Federal sources to assist in the activities authorized; and

(D) demonstrate an intent to carry out activities that target local educational agencies—

(i) that serve not fewer than 10,000 children from low-income families;

(ii) for which not less than 20 percent of the children served by the local educational agency are children from low-income families; or

(iii) with a total of less than 600 students in average daily attendance at the schools that are served by the local educational agency and all of those schools are designated with a school locale code of 7 or 8, or otherwise designated as a rural school, as determined by the Secretary.

(e) **PRIORITY CONSIDERATION.**—The Secretary shall give priority to eligible recipients that submit an application under subsection (d) that demonstrates a pervasive need to expand or develop Advanced Placement or International Baccalaureate programs in mathematics and science.

(f) **AUTHORIZED ACTIVITIES.**—An eligible recipient shall use the grant funds provided under this section for the following activities:

(1) To identify and work with local educational agencies to expand or develop Advanced Placement or International Baccalaureate and pre-Advanced Placement or pre-International Baccalaureate programs in mathematics and science in schools served by the local educational agencies.

(2) To work with the local educational agencies to establish Advanced Placement or International Baccalaureate coordinators in each secondary school served by the local educational agencies.

(3) To ensure master teachers provide training to prepare teachers to teach Advanced Placement or International Baccalaureate courses in mathematics and science, which shall include at a minimum—

(A) week-long summer institutes; and

(B) 2-day seminars in the teachers' disciplines each year for 4 years.

(4) To ensure master teachers provide training to prepare teachers to teach pre-Advanced Placement or pre-International Baccalaureate courses in mathematics and science, which shall include at a minimum—

(A) a 4-day summer institute; and

(B) 4 days on campus each year for 4 years.

(5) To provide stipends to teachers who satisfactorily complete the Advanced Placement or International Baccalaureate or pre-Advanced Placement or pre-International Baccalaureate training.

(6) To provide a bonus to a teacher who has satisfactorily completed the Advanced Placement or International Baccalaureate or pre-Advanced Placement or pre-International Baccalaureate training for each student of the teacher who passes an Advanced Placement or International Baccalaureate examination in mathematics and science.

(7) To provide test preparation sessions for students taking Advanced Placement or International Baccalaureate examinations in mathematics and science.

(8) To reimburse students half of the cost of the Advanced Placement or International Baccalaureate mathematics and science examination fees.

(9) To provide scholarships to students who pass the Advanced Placement or International Baccalaureate mathematics and science examinations.

(g) EVALUATION AND ACCOUNTABILITY PLAN.—

(1) IN GENERAL.—Each eligible recipient receiving a grant under this section shall develop an evaluation and accountability plan for activities assisted under this section that includes rigorous objectives that measure the impact of activities assisted under this section.

(2) CONTENTS.—The plan developed pursuant to paragraph (1) shall include—

(A) the number of students served by the eligible recipient who are taking pre-Advanced Placement or pre-International Baccalaureate courses in mathematics and science;

(B) the number of students served by the eligible recipient who are taking Advanced Placement or International Baccalaureate courses in mathematics and science;

(C) the number of students served by the eligible recipient who take Advanced Placement or International Baccalaureate mathematics and science examinations;

(D) the number of students served by the eligible recipients who pass Advanced Placement or International Baccalaureate mathematics and science examinations; and

(E) the number of teachers trained in Advanced Placement or International Baccalaureate and pre-Advanced Placement or pre-International Baccalaureate mathematics and science programs.

(h) MATCHING REQUIREMENTS FOR GRANTS.—Each eligible recipient receiving a grant under this section shall provide, from non-Federal sources (in cash or in kind), an amount equal to 100 percent of the amount of the grant for each year of the grant, of which not less than 25 percent shall come from State sources.

(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

- (1) \$241,000,000 for fiscal year 2007;
- (2) \$341,000,000 for fiscal year 2008;
- (3) \$453,000,000 for fiscal year 2009;
- (4) \$596,000,000 for fiscal year 2010; and
- (5) \$731,000,000 for fiscal year 2011.

CHAPTER 4—NATIONAL CLEARINGHOUSE ON MATHEMATICS AND SCIENCE TEACHING MATERIALS

SEC. 161. NATIONAL CLEARINGHOUSE ON MATHEMATICS AND SCIENCE TEACHING MATERIALS.

(a) PURPOSE.—The purpose of this section is to strengthen the skills of mathematics and science teachers by establishing a national clearinghouse of proven effective kindergarten through grade 12 mathematics and science teaching materials.

(b) EFFECTIVE MATHEMATICS AND SCIENCE TEACHING MATERIALS.—The Secretary is authorized to convene, not later than 1 year after the date of enactment of this Act, a national panel to collect proven effective kindergarten through grade 12 mathematics and science teaching materials, or to support the development of new materials where no effective models exist.

(c) COMPOSITION OF NATIONAL PANEL.—

(1) CONSULTATION.—The Secretary shall appoint members to the panel after consultation with the National Academy of Sciences of the National Academies.

(2) SELECTION.—The Secretary shall ensure that the panel broadly represents scientists, practitioners, educators, representatives from entities with expertise in education, mathematics, and science, and parents. The Secretary shall ensure that the panel includes the following:

(A) A majority representation of educators and parents directly involved in the kindergarten through grade 12 education process.

(B) Proportionate representation of educators and parents from all demographic areas, including urban, suburban and rural schools.

(C) Proportionate representation of educators and parents from public and private schools.

(3) QUALIFICATIONS OF MEMBERS.—The members of the panel shall be individuals who have substantial knowledge or experience relating to—

(A) education, mathematics, or science policy or programs; or

(B) education, mathematics, or science curricula content development.

(d) AUTHORIZED ACTIVITIES OF NATIONAL PANEL.—The panel shall—

(1) identify proven effective kindergarten through grade 12 mathematics and science teaching materials;

(2) identify the need for new mathematics and science teaching materials, and support the development of such new materials through contracts and cooperative agreements; and

(3) establish a national clearinghouse of information on effective kindergarten through grade 12 mathematics and science teaching materials.

(e) DISSEMINATION.—The Secretary shall disseminate information related to the clearinghouse to State educational agencies, and otherwise make available and accessible to local educational agencies and schools the teaching materials collected by the panel in the form of a searchable online database or Internet web site.

(f) MATHEMATICS AND SCIENCE TEACHING MATERIALS.—

(1) RELIABILITY AND MEASUREMENT.—The kindergarten through grade 12 mathematics and science teaching materials collected under this section shall be—

(A) reliable, valid, and grounded in scientific theory and research in existence as of the date of the collection of materials;

(B) reviewed regularly to assess effectiveness; and

(C) developed in careful consideration of State academic assessments and student academic achievement standards.

(2) STUDENTS WITH DIVERSE LEARNING NEEDS.—The teaching materials shall include relevant materials for students with diverse learning needs, particularly for students with disabilities and students with limited English proficiency.

(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section \$20,000,000 for fiscal year 2007 and \$20,000,000 for each of the fiscal years 2008 through 2011.

CHAPTER 5—FUTURE AMERICAN-SCIENTIST SCHOLARSHIPS

SEC. 171. FUTURE AMERICAN-SCIENTIST SCHOLARSHIPS.

(a) PURPOSE.—The purpose of this section is to increase the number and percentage of citizens of the United States who earn baccalaureate degrees in mathematics or science (including engineering) by providing 25,000 new competitive merit-based undergraduate scholarships to students who are citizens of the United States, for the purpose of enabling each such student to obtain a baccalaureate degree in mathematics or science at a 4-year institution of higher education.

(b) SCHOLARSHIPS.—

(1) IN GENERAL.—From the amounts authorized under subsection (e), the Secretary shall award the scholarships to eligible students that shall be used by the eligible students to pay for qualifying expenses at the 4-year institution of higher education of the eligible students' choosing.

(2) FUTURE AMERICAN-SCIENTIST SCHOLARSHIPS.—A scholarship awarded under this section shall be called a "Future American-Scientist Scholarship".

(c) AMOUNT; DURATION.—

(1) AMOUNT.—A scholarship award under this section shall be in an amount of not more than \$20,000 per year.

(2) DURATION OF SCHOLARSHIP.—A scholarship awarded to an eligible student under this section shall be for the number of years necessary for the eligible student to earn a baccalaureate degree in mathematics or science, except that no scholarship under this section shall be awarded for a period of more than 4 years.

(d) DEFINITIONS.—In this section:

(1) ELIGIBLE STUDENT.—The term "eligible student" means a student who—

(A) is a citizen of the United States;

(B) is attending a 4-year institution of higher education;

(C) is enrolled, or will be enrolled at the start of the next academic year, in a course of study at an institution of higher education that leads to a baccalaureate degree in mathematics or science;

(D) demonstrates aptitude, as determined by the Secretary, in mathematics or science; or

(E) for each year of a scholarship under this section, demonstrates continued academic achievement and progress, as determined by the Secretary, toward completion of a baccalaureate degree in mathematics or science.

(2) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(3) QUALIFIED EXPENSES.—The term "qualified expenses" means the tuition, books, fees, supplies, and equipment required for a course of instruction leading to a baccalaureate degree in mathematics or science at a 4-year institution of higher education of the eligible student's choosing.

(4) SECRETARY.—The term "Secretary" means the Secretary of Energy.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

- (1) \$375,000,000 for fiscal year 2007;
- (2) \$750,000,000 for fiscal year 2008;
- (3) \$1,125,000,000 for fiscal year 2009; and
- (4) \$1,500,000,000 for each of the fiscal years 2010 through 2013.

CHAPTER 6—GRADUATE RESEARCH FELLOWSHIPS

SEC. 181. GRADUATE RESEARCH FELLOWSHIPS IN SCIENTIFIC AREAS OF NATIONAL NEED.

(a) FELLOWSHIPS AUTHORIZED.—From the amounts appropriated under subsection (e), the Secretary shall establish a fellowship program to provide tuition and financial support for eligible students pursuing master's and doctoral degrees in mathematics or science (including engineering) or other areas of national need.

(b) AREAS OF NATIONAL NEED.—The Secretary may establish, on an annual basis, areas of national need important to the mission of the Department of Energy, and may use the areas of national need in determining the specific fields of study to be supported by fellowship awards under this section. In establishing the areas of national need, the Secretary shall consider the results of the survey conducted under section 1101 of the Energy Policy Act of 2005 (42 U.S.C. 16411).

(c) USE AND AMOUNT OF AWARDS.—A fellowship award under this section shall be—

(1) in an amount that is commensurate with the amount of similar graduate research fellowships awarded by the National Science Foundation; and

(2) used by the eligible student to cover educational expenses and to provide additional financial support.

(d) DEFINITIONS.—In this section:

(1) ELIGIBLE STUDENT.—The term “eligible student” means a student who is enrolled in a master’s or doctoral degree program in mathematics or science (including engineering) or other areas of national need at an institution of higher education (as defined in section 171).

(2) SECRETARY.—The term “Secretary” means the Secretary of Energy.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated under this section—

- (1) \$225,000,000 for fiscal year 2007;
- (2) \$450,000,000 for fiscal year 2008; and
- (3) \$675,000,000 for each of the fiscal years 2009 through 2013.

Subtitle B—National Science Foundation Early-Career Research Grants

SEC. 191. NATIONAL SCIENCE FOUNDATION EARLY-CAREER RESEARCH GRANTS.

(a) PURPOSE.—It is the purpose of this section to authorize research grants in the National Science Foundation, for early-career scientists and engineers for purposes of pursuing independent research.

(b) DEFINITION OF ELIGIBLE EARLY-CAREER RESEARCHER.—In this section, the term “eligible early-career researcher” means an individual who—

- (1) completed a doctorate or other terminal degree not more than 10 years before the date of enactment of this Act and has demonstrated promise in the field of science, technology, engineering, or mathematics; or
- (2) has an equivalent professional qualification in the field of science, technology, engineering, or mathematics.

(c) GRANT PROGRAM AUTHORIZED.—

(1) IN GENERAL.—The Director of the National Science Foundation shall award not less than 65 grants per year to outstanding eligible early-career researchers to support the work of such researchers in universities, private industry, or federally-funded research and development centers.

(2) APPLICATION.—An eligible early-career researcher who desires to receive a grant under this section shall submit to the Director of the National Science Foundation an application at such time, in such manner, and accompanied by such information as the Director may require.

(3) SPECIAL CONSIDERATION.—In awarding grants under this section, the Director of the National Science Foundation shall give special consideration to eligible early-career researchers who have followed alternative career paths such as working part-time or in non-academic settings, or who have taken a significant career break or other leave of absence.

(4) DURATION AND AMOUNT.—A grant under this section shall be 5 years in duration. An eligible early career-researcher who receives a grant under this section shall receive \$100,000 for each year of the grant period.

(5) USE OF FUNDS.—An eligible early career-researcher who receives a grant under this section shall use the grant funds for basic research in natural sciences, engineering, mathematics, or computer sciences at a university, private industry, or federally-funded research and development center.

(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

- (A) \$6,500,000 for fiscal year 2007;
- (B) \$13,000,000 for fiscal year 2008;
- (C) \$19,500,000 for fiscal year 2009;
- (D) \$26,000,000 for fiscal year 2010; and
- (E) \$32,500,000 for fiscal year 2011.

TITLE II—SOWING THE SEEDS THROUGH SCIENCE AND ENGINEERING RESEARCH

Subtitle A—Office of Science and Technology Policy Matters

SEC. 211. COORDINATION OF SCIENCE, MATHEMATICS, AND ENGINEERING EDUCATION PROGRAMS.

(a) NATIONAL GOALS.—

(1) BODY FOR ESTABLISHMENT OF GOALS.—The Director of the Office of Science and Technology Policy shall establish within the President’s Committee of Advisors on Science and Technology a standing subcommittee on education in mathematics, science, and engineering in the Federal Government.

(2) RESPONSIBILITY.—The subcommittee established under this subsection shall—

- (A) develop national goals for the support by the Federal Government of education in mathematics, science, and engineering; and
- (B) periodically review and update any goals so developed.

(3) PUBLIC COMMENT.—The Director shall enter into an agreement with the National Academy of Sciences or other appropriate scientific organization to seek public comment on the national goals developed under this subsection.

(b) DEPUTY ASSISTANT DIRECTOR FOR SCIENCE, MATHEMATICS, AND ENGINEERING EDUCATION PROGRAMS.—

(1) IN GENERAL.—There shall be in the Office of Science and Technology Policy a Deputy Assistant Director of the Office of Science and Technology Policy for Science, Mathematics, and Engineering Education Programs who shall be appointed by the Director of the Office of Science and Technology Policy, acting through the Associate Director for Science of the Office of Science and Technology Policy, from among individuals having the qualifications specified in paragraph (2).

(2) QUALIFICATIONS FOR APPOINTMENT.—The qualifications of an individual for appointment as Deputy Assistant Director shall include such professional experience and expertise, and such other qualifications, as the Director of the Office of Science and Technology Policy considers appropriate to permit such individual to advise the Director on all matters relating to the education programs of the Executive Branch on mathematics, science, and technology.

(c) RESPONSIBILITY.—The Deputy Assistant Director of the Office of Science and Technology Policy for Science, Mathematics, and Engineering Education Programs shall ensure effective coordination among the departments, agencies, and elements of the Federal Government in the discharge of the education programs of the Executive Branch on mathematics, science, and technology.

(d) PLAN FOR COORDINATION OF PROGRAMS.—

(1) IN GENERAL.—In carrying out the responsibility described in subsection (c), the Deputy Assistant Director of the Office of Science and Technology Policy for Science, Mathematics, and Engineering Education Programs shall develop each year a plan for the coordination of the education programs of the Executive Branch on mathematics, science, and technology during the five fiscal years beginning in the year of such plan.

(2) ELEMENTS.—Each plan developed under this subsection shall include—

(A) mechanisms for the coordination of the education programs of the Executive Branch on mathematics, science, and technology during the five fiscal years beginning in the year of such plan; and

(B) recommendations on funding, by agency, of such education programs during each such fiscal year.

(3) CONSISTENCY WITH NATIONAL GOALS.—Each plan developed under this subsection

shall be consistent with the most current national goals for the support by the Federal Government of education in mathematics, science, and engineering developed under subsection (a).

(4) AVAILABILITY TO PUBLIC.—The Director of the Office of Science and Technology Policy shall take appropriate actions to ensure that each plan developed under this subsection is available to the public.

(e) STAFFING AND OTHER RESOURCES.—The Director of the Office of Science and Technology Policy shall assign the Deputy Assistant Director of the Office of Science and Technology Policy for Science, Mathematics, and Engineering Education Programs such personnel and other resources as the Director considers appropriate in order to permit the Deputy Assistant Director to carry out the duties of the Deputy Assistant Director under this section.

(f) DEADLINES FOR CERTAIN ACTIONS.—

(1) ESTABLISHMENT OF SUBCOMMITTEE.—The Director of the Office of Science and Technology Policy shall establish the subcommittee required by subsection (a)(1) not later than 30 days after the date of the enactment of this Act.

(2) APPOINTMENT OF DEPUTY ASSISTANT DIRECTOR.—The Director of the Office of Science and Technology Policy, acting through the Associate Director for Science of the Office of Science and Technology Policy, shall make the first appointment to the position of Deputy Assistant Director of the Office of Science and Technology Policy for Science, Mathematics, and Engineering Education Programs under subsection (b)(1) not later than 60 days after the date of the enactment of this Act.

SEC. 212. NATIONAL COORDINATION OFFICE FOR ADVANCED RESEARCH INSTRUMENTATION AND FACILITIES.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—The Director of the Office of Science and Technology Policy shall establish within the Office of Science and Technology Policy an office to be known as the “National Coordination Office for Advanced Research Instrumentation and Facilities”.

(2) HEAD OF OFFICE.—The head of the National Coordination Office for Advanced Research Instrumentation and Facilities shall be the Director of the National Coordination Office for Advanced Research Instrumentation and Facilities, who shall be appointed by the Director of the Office of Science and Technology Policy.

(3) STAFF AND OTHER RESOURCES.—The Director of the Office of Science and Technology Policy shall assign to the National Coordination Office for Advanced Research Instrumentation and Facilities such personnel and other resources as the Director of the Office of Science and Technology Policy considers appropriate in order to permit the National Coordination Office for Advanced Research Instrumentation and Facilities to carry out its duties under this section.

(4) DEADLINE FOR ESTABLISHMENT.—The National Coordination Office for Advanced Research Instrumentation and Facilities shall be established not later than 30 days after the date of the enactment of this Act.

(b) DUTIES.—

(1) IN GENERAL.—The National Coordination Office for Advanced Research Instrumentation and Facilities shall coordinate the award by the departments, agencies, and other elements of the Federal Government of grants for advanced research instrumentation and facilities.

(2) ADVANCED RESEARCH INSTRUMENTATION AND FACILITIES.—

(A) IN GENERAL.—For purposes of this section, advanced research instrumentation and

facilities are specially designed and developed instruments or tools (whether of a physical or nonphysical nature) that are available commercially but are overly expensive for design and development under a single research grant.

(B) **EXAMPLES.**—Examples of advanced research instrumentation and facilities for purposes of this section include the following:

- (i) Single, stand-alone instruments or instrument suites.
- (ii) Networks.
- (iii) Computational modeling applications.
- (iv) Computer databases.
- (v) Sensor systems.
- (vi) Facilities that house ensembles of interrelated instruments.
- (vii) Instruments assembled from components.

(3) **DISCHARGE OF DUTIES.**—The Office shall coordinate the award of grants for advanced research instrumentation and facilities under this section in accordance with the strategic implementation plan developed under subsection (c).

(c) **STRATEGIC IMPLEMENTATION PLAN.**—

(1) **PLAN REQUIRED.**—Not later than one year after the date of the enactment of this Act, the Director of the Office of Science and Technology Policy shall, in consultation with the Director of the Office of Management and Budget, develop a plan for the award by the departments, agencies, and other elements of the Federal Government of grants for advanced research instrumentation and facilities during the five-year period beginning on the date of the issuance of the plan.

(2) **ELEMENTS.**—The plan required by paragraph (1) shall include the following:

(A) Criteria applicable to the award of grants for advanced research instrumentation and facilities, including criteria applicable to—

- (i) scientific and technical merit;
- (ii) the identification of the strategic requirements of the departments, agencies, and other elements of the Federal Government; and
- (iii) national science and technology needs.

(B) An assessment of the current and anticipated needs of the departments, agencies, and other elements of the Federal Government for advanced research instrumentation and facilities.

(C) A report to Congress on the proposed allocation of funds, including amounts authorized to be appropriated by subsection (f), by the departments, agencies, and other elements of the Federal Government for grants for advanced research instrumentation and facilities.

(3) **PUBLIC COMMENT.**—In developing the plan required by paragraph (1), the Director of the Office of Science and Technology Policy shall enter into an agreement with the National Academy of Sciences, or other similar entity, to secure public comments on the plan.

(d) **RECOMMENDATIONS ON AGENCY FUNDING.**—

(1) **IN GENERAL.**—The Director of the Office of Science and Technology Policy shall, in consultation with the Director of the National Coordination Office for Advanced Research Instrumentation and Facilities, make recommendations each year to the Director of the Office of Management and Budget on the amount of funds to be requested for the departments, agencies, and other elements of the Federal Government for the fiscal year beginning in such year for the award of grants for advanced research instrumentation and facilities.

(2) **PURPOSE.**—The purpose of the recommendations under paragraph (1) shall be to advise the Director of the Office of Man-

agement and Budget on the amounts to be requested in the budget of the President (as submitted to Congress under section 1105 of title 31, United States Code) for each fiscal year for the award of grants for advanced research instrumentation and facilities.

(e) **USE OF GRANT AMOUNTS.**—Amounts under grants awarded by departments, agencies, and other elements of the Federal Government for advanced research instrumentation and facilities may be used for purposes as follows:

- (1) The purchase and installation of instruments.
- (2) The commissioning of equipment.
- (3) The calibration of instruments.
- (4) The acquisition of parts and materials for construction of instruments.
- (5) Personnel costs of personnel engaged in the development of instruments.
- (6) The operation and maintenance of instruments.

(7) Such other purposes as the Director of the National Coordination Office for Advanced Research Instrumentation and Facilities considers appropriate.

(f) **AUTHORIZATION OF APPROPRIATIONS.**—

(1) **IN GENERAL.**—In addition to amounts appropriated under Federal law other than this Act, there is authorized to be appropriated for each of fiscal years 2008 through 2012, to carry out this section (including the plan specified in subsection (c))—

(A) \$1,000,000 to the Office of Science and Technology Policy;

(B) \$150,000,000 to the National Science Foundation;

(C) \$87,000,000 to the Department of Defense;

(D) \$152,000,000 to the Office of Science of the Department of Energy; and

(E) \$117,000,000 to the National Aeronautics and Space Administration.

(2) **AVAILABILITY.**—The amount authorized to be appropriated by this subsection shall remain available until expended.

SEC. 213. HIGH-RISK, HIGH-PAYOFF RESEARCH.

(a) **IN GENERAL.**—Not later than 180 days after the date of the enactment of this Act, the Director of the Office of Science and Technology Policy shall, in consultation with the Director of the Office of Management and Budget, establish guidelines to ensure that each Federal research agency allocates not less than 8 percent of the funds available to such agency each fiscal year for basic research for high-risk, high-payoff research.

(b) **HIGH-RISK, HIGH-PAYOFF RESEARCH.**—For purposes of this section, high-risk, high-payoff research is research that—

- (1) has the potential for yielding results with far-ranging or wide-ranging implications; but
- (2) is too novel or spans too diverse a range of disciplines to fare well in the traditional peer review process.

(c) **GUIDELINE ELEMENTS.**—The guidelines required by subsection (a) shall include provisions on the following:

- (1) Expedited procedures for the approval of the use of funds for high-risk, high-payoff research.
- (2) Annual reports by Federal research agencies on activities relating to high-risk, high-payoff research.
- (3) Criteria to establish the duration of funding for high-risk, high-payoff research projects.
- (4) Objectives for high-risk, high-payoff research projects.
- (5) Such other criteria, objectives, or other matters as the Director of the Office of Science and Technology Policy considers appropriate.

(d) **PUBLIC COMMENT.**—The Director of the Office of Science and Technology Policy

shall enter into an agreement with the National Academy of Sciences, or similar entity, to solicit public comment, through a broad media solicitation, on the guidelines required by subsection (a) before the final issuance of such guidelines.

(e) **REVIEW.**—The President's Committee of Advisors on Science and Technology shall, not less often than once every two years, conduct a review to determine whether or not Federal research agencies are allocating basic research funds in accordance with the guidelines required by subsection (a).

(f) **ANNUAL REPORTS TO CONGRESS.**—

(1) **REPORTS REQUIRED.**—The Director of the Office of Management and Budget shall, in consultation with the Director of the Office of Science and Technology Policy, submit to Congress each year a report on the use by Federal research agencies of basic research funds for high-risk, high-payoff research during the preceding fiscal year.

(2) **TIME FOR SUBMITTAL.**—The Director of the Office of Management and Budget shall submit the report required by paragraph (1) for a year together with the budget of the President for the fiscal year beginning in such year (as submitted to Congress under section 1105 of title 31, United States Code).

(g) **DEFINITIONS.**—In this section:

(1) **FEDERAL RESEARCH AGENCY.**—The term “Federal research agency” means a major organizational component of a department or agency of the Federal Government, or other establishment of the Federal Government operating with appropriated funds, that has as its primary purpose the performance of scientific research.

(2) **MAJOR ORGANIZATIONAL COMPONENT.**—The term “major organizational component”, with respect to a department, agency, or other establishment of the Federal Government, means a component of the department, agency, or other establishment that is administered by an individual whose rate of basic pay is not less than the rate of basic pay payable under level V of the Executive Schedule under section 5316 of title 5, United States Code.

SEC. 214. PRESIDENT'S INNOVATION AWARD.

(a) **AUTHORITY TO AWARD.**—

(1) **IN GENERAL.**—The Director of the Office of Science and Technology Policy shall, subject to the approval of the President, award each year to one or more individuals an award that recognizes recent innovations in science and engineering in the United States.

(2) **DESIGNATION.**—The award made under this section shall be known as the “President's Innovation Award”.

(3) **PRESENTATION.**—The presentation of awards made under this section shall be made by the President.

(b) **SELECTION OF RECIPIENTS.**—

(1) **IN GENERAL.**—The Director of the Office of Science and Technology Policy shall identify recipients of the award under this section from among individuals whose achievements are recognized in the most recent document entitled “Interagency Research and Development Priorities” published by the Director of the Office of Management and Budget and the Director of the Office of Science and Technology Policy.

(2) **SOLICITATION OF RECOMMENDATIONS.**—In identifying potential recipients of the award under this section, the Director of the Office of Science and Technology Policy shall solicit recommendations from the heads of Federal agencies and the general public.

(c) **NATURE OF AWARD.**—The award made under this section shall consist of the following:

- (1) A medal, of such design as the Director of the Office of Science and Technology Policy shall determine (subject to the approval of the President).

(2) A certificate of recognition.

(3) A cash prize, in such amount as the Director considers appropriate.

(d) **AUTHORIZATION OF APPROPRIATIONS.**—There is hereby authorized to be appropriated to the Office of Science and Technology Policy each fiscal year \$1,000,000 for the making of awards under this section.

Subtitle B—National Aeronautics and Space Administration Matters

SEC. 221. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION EARLY-CAREER RESEARCH GRANTS.

(a) **PURPOSE.**—It is the purpose of this section to authorize research grants in the National Aeronautics and Space Administration for early-career scientists and engineers for purposes of pursuing independent research.

(b) **DEFINITION OF ELIGIBLE EARLY-CAREER RESEARCHER.**—In this section, the term “eligible early-career researcher” means an individual who—

(1) completed a doctorate or other terminal degree not more than 10 years before the date of enactment of this Act and has demonstrated promise in the field of science, technology, engineering, or mathematics; or

(2) has an equivalent professional qualification in the field of science, technology, engineering, or mathematics.

(c) **GRANT PROGRAM AUTHORIZED.**—

(1) **IN GENERAL.**—The Administrator of the National Aeronautics and Space Administration shall award not less than 45 grants per year to outstanding eligible early-career researchers to support the work of such researchers in universities, private industry, or federally-funded research and development centers.

(2) **APPLICATION.**—An eligible early-career researcher who desires to receive a grant under this section shall submit to the Administrator of the National Aeronautics and Space Administration an application at such time, in such manner, and accompanied by such information as the Administrator may require.

(3) **SPECIAL CONSIDERATION.**—In awarding grants under this section, the Administrator of the National Aeronautics and Space Administration shall give special consideration to eligible early-career researchers who have followed alternative career paths such as working part-time or in non-academic settings, or who have taken a significant career break or other leave of absence.

(4) **DURATION AND AMOUNT.**—A grant under this section shall be 5 years in duration. An eligible early career-researcher who receives a grant under this section shall receive \$100,000 for each year of the grant period.

(5) **USE OF FUNDS.**—An eligible early career-researcher who receives a grant under this section shall use the grant funds for basic research in natural sciences, engineering, mathematics, or computer sciences at a university, private industry, or federally-funded research and development center.

(6) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to carry out this section—

- (A) \$4,500,000 for fiscal year 2007;
- (B) \$9,000,000 for fiscal year 2008;
- (C) \$13,500,000 for fiscal year 2009;
- (D) \$18,000,000 for fiscal year 2010; and
- (E) \$22,500,000 for fiscal year 2011.

SEC. 222. AUTHORIZATION OF APPROPRIATIONS FOR THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION FOR BASIC SCIENCES.

(a) **IN GENERAL.**—There is hereby authorized to be appropriated for the National Aeronautics and Space Administration for basic sciences for research specified in subsection (b), amounts as follows:

- (1) \$2,768,000,000 for fiscal year 2007.

(2) \$3,044,000,000 for fiscal year 2008.

(3) \$3,349,000,000 for fiscal year 2009.

(4) \$3,684,000,000 for fiscal year 2010.

(5) \$4,052,000,000 for fiscal year 2011.

(6) \$4,457,000,000 for fiscal year 2012.

(7) \$4,903,000,000 for fiscal year 2013.

(b) **COVERED RESEARCH.**—The research specified in this subsection is research under programs as follows:

(1) The Solar System Exploration Research Program.

(2) The Mars Exploration Research Program.

(3) The Astronomical Search for Origins Research Program.

(4) The Structure and Evolution of the Universe Research Program.

(5) The Earth–Sun Connection Research Program.

(6) The Earth Systems Science Research Program.

(7) The Earth Science Applications Research Program.

(8) The Biological Sciences Research Program.

(9) The Physical Sciences Research Program.

(10) The Aeronautics Program.

(11) Such other basic research programs as the Administrator of the National Aeronautics and Space Administration may determine to be appropriate, after notifying the appropriate committees of Congress of the Administrator's intent to make the determination.

Subtitle C—Communications Matters

SEC. 231. SENSE OF SENATE ON POLICIES TO ACCELERATE DEPLOYMENT OF ACCESS TO BROADBAND INTERNET.

It is the sense of the Senate that Congress and the Federal Communications Commission should work together to ensure the implementation of regulatory policies that facilitate and accelerate the deployment of access to broadband Internet to order to provide broadband Internet service to as many residences, businesses, and schools as possible in both urban areas and rural areas.

Subtitle D—Science Parks

SEC. 241. DEVELOPMENT OF SCIENCE PARKS.

(a) **FINDING.**—Section 2 of the Stevenson-Wylder Technology Innovation Act of 1980 (15 U.S.C. 3701) is amended by adding at the end the following new paragraph:

“(12) It is in the best interests of the Nation to encourage the formation of science parks to promote the clustering of innovation through high technology activities.”.

(b) **DEFINITION.**—Section 4 of such Act (15 U.S.C. 3703) is amended by adding at the end the following new paragraphs:

“(14) ‘Science park’ means a group of inter-related companies and institutions, including suppliers, service providers, institutions of higher education, start-up incubators, and trade associations that cooperate and compete and are located in a specific area whose administration promotes real estate development, technology transfer, and partnerships between such companies and institutions, and does not mean a business or industrial park.

“(15) ‘Business or industrial park’ means primarily a for-profit real estate venture of businesses or industries which do not necessarily reinforce each other through supply chain or technology transfer mechanisms.

“(16) ‘Science park infrastructure’ means facilities that support the daily economic activity of a science park.”.

(c) **PROMOTION OF DEVELOPMENT OF SCIENCE PARKS.**—Section 5(c) of such Act (15 U.S.C. 3704(c)) is amended—

(1) in paragraph (14), by striking “and” at the end;

(2) in paragraph (15), by striking the period at the end and inserting “; and”; and

(3) by adding at the end the following new paragraph:

“(16) promote the formation of science parks.”.

(d) **SCIENCE PARKS.**—Such Act is further amended by adding at the end the following new section:

“SEC. 24. SCIENCE PARKS.

“(a) **DEVELOPMENT OF PLANS FOR CONSTRUCTION OF SCIENCE PARKS.**—

“(1) **IN GENERAL.**—The Secretary shall award grants for the development of feasibility studies and plans for the construction of new or expansion of existing science parks.

“(2) **LIMITATION ON AMOUNT OF GRANTS.**—The amount of a grant awarded under this subsection may not exceed \$750,000.

“(3) **AWARD.**—

“(A) **COMPETITION REQUIRED.**—The Secretary shall award any grant under this subsection pursuant to a full and open competition.

“(B) **ADVERTISING.**—The Secretary shall advertise any competition under this paragraph in the Commerce Business Daily.

“(C) **SELECTION CRITERIA.**—The Secretary shall publish the criteria to be utilized in any competition under this paragraph for the selection of recipients of grants under this subsection. Such criteria shall include requirements relating to—

“(i) the number of jobs to be created at the science park each year for a period of 5 years;

“(ii) the funding to be required to construct or expand the science park over the first 5 years;

“(iii) the amount and type of cost matching by the applicant;

“(iv) the types of businesses and research entities expected in the science park and surrounding community;

“(v) letters of intent by businesses and research entities to locate in the science park;

“(vi) the capacity of the science park for expansion over a period of 25 years;

“(vii) the quality of life at the science park for employees at the science park;

“(viii) the capability to attract a well trained workforce to the science park;

“(ix) the management of the science park;

“(x) expected risks in the construction and operation of the science park;

“(xi) risk mitigation;

“(xii) transportation and logistics;

“(xiii) physical infrastructure, including telecommunications; and

“(xiv) ability to collaborate with other science parks throughout the world.

“(4) **AUTHORIZATION OF APPROPRIATIONS.**—There is authorized to be appropriated for each of fiscal years 2007 through 2012, \$7,500,000 to carry out this subsection.

“(b) **REVOLVING LOAN PROGRAM FOR DEVELOPMENT OF SCIENCE PARK INFRASTRUCTURE.**—

“(1) **IN GENERAL.**—The Secretary shall make grants to six regional centers for the development of existing science park infrastructure through the operation of revolving loan funds by such centers.

“(2) **SELECTION OF CENTERS.**—

“(A) **IN GENERAL.**—The Secretary shall select the regional centers to be awarded grants under this subsection utilizing such criteria as the Secretary shall prescribe.

“(B) **CRITERIA.**—The criteria prescribed by the Secretary under this paragraph shall include criteria relating to revolving loan funds and revolving loan fund operators under paragraph (4), including—

“(i) the qualifications of principal officers;

“(ii) non-Federal cost matching requirements; and

“(iii) conditions for the termination of loan funds.

“(3) **LIMITATION ON LOAN AMOUNT.**—The amount of any loan for the development of

existing science park infrastructure that is funded under this subsection may not exceed \$3,000,000.

“(4) REVOLVING LOAN FUNDS.—

“(A) IN GENERAL.—A regional center receiving a grant under this subsection shall fund the development of existing science park infrastructure through the utilization of a revolving loan fund.

“(B) OPERATION AND INTEGRITY.—The Secretary shall prescribe regulations to maintain the proper operation and financial integrity of revolving loan funds under this paragraph.

“(C) EFFICIENT ADMINISTRATION.—The Secretary may—

“(i) at the request of a grantee, amend and consolidate grant agreements governing revolving loan funds to provide flexibility with respect to lending areas and borrower criteria;

“(ii) assign or transfer assets of a revolving loan fund to a third party for the purpose of liquidation, and a third party may retain assets of the fund to defray costs related to liquidation; and

“(iii) take such actions as are appropriate to enable revolving loan fund operators to sell or securitize loans (except that the actions may not include issuance of a Federal guaranty by the Secretary).

“(D) TREATMENT OF ACTIONS.—An action taken by the Secretary under this paragraph with respect to a revolving loan fund shall not constitute a new obligation if all grant funds associated with the original grant award have been disbursed to the recipient.

“(E) PRESERVATION OF SECURITIES LAWS.—

“(i) NOT TREATED AS EXEMPTED SECURITIES.—No securities issued pursuant to subparagraph (C)(iii) shall be treated as exempted securities for purposes of the Securities Act of 1933 or the Securities Exchange Act of 1934, unless exempted by rule or regulation of the Securities and Exchange Commission.

“(ii) PRESERVATION.—Except as provided in clause (i), no provision of this paragraph or any regulation issued by the Secretary under this paragraph shall supersede or otherwise affect the application of the securities laws (as such term is defined in section 2(a)(47) of the Securities Exchange Act of 1934) or the rules, regulations, or orders of the Securities and Exchange Commission or a self-regulatory organization thereunder.

“(5) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated for each of fiscal years 2007 through 2012, \$60,000,000 to carry out this subsection.

“(c) LOAN GUARANTEES FOR SCIENCE PARK INFRASTRUCTURE.—

“(1) IN GENERAL.—The Secretary shall guarantee up to 80 percent of the loan amount for loans exceeding \$10,000,000 for projects for the construction of science park infrastructure.

“(2) LIMITATIONS ON GUARANTEE AMOUNTS.—The maximum amount of loan principal guaranteed under this subsection may not exceed—

“(A) \$50,000,000 with respect to any single project; and

“(B) \$500,000,000 with respect to all projects.

“(3) SELECTION OF GUARANTEE RECIPIENTS.—The Secretary shall select recipients of loan guarantees under this subsection based upon the ability of the recipient to collateralize the loan amount through bonds, equity, property, and other such criteria as the Secretary shall prescribe.

“(4) TERMS AND CONDITIONS FOR LOAN GUARANTEES.—For purposes of this section, the loans guaranteed shall be subject to such terms and conditions as the Secretary may prescribe, except that—

“(A) the final maturity of such loans made or guaranteed shall not exceed (as determined by the Secretary) the lesser of—

“(i) 30 years and 32 days; or

“(ii) 90 percent of the useful life of any physical asset to be financed by such loan;

“(B) no loan made or guaranteed may be subordinated to another debt contracted by the borrower or to any other claims against the borrowers in the case of default;

“(C) no loan may be guaranteed unless the Secretary determines that the lender is responsible and that adequate provision is made for servicing the loan on reasonable terms and protecting the financial interest of the United States;

“(D) no loan may be guaranteed if the income from such loan is excluded from gross income for purposes of chapter 1 of the Internal Revenue Code of 1986, or if the guarantee provides significant collateral or security, as determined by the Secretary, for other obligations the income from which is so excluded;

“(E) any guarantee shall be conclusive evidence that said guarantee has been properly obtained, that the underlying loan qualified for such guarantee, and that, but for fraud or material misrepresentation by the holder, such guarantee shall be presumed to be valid, legal, and enforceable;

“(F) the Secretary shall prescribe explicit standards for use in periodically assessing the credit risk of new and existing direct loans or guaranteed loans;

“(G) the Secretary must find that there is a reasonable assurance of repayment before extending credit assistance; and

“(H) new loan guarantees may not be committed except to the extent that appropriations of budget authority to cover their costs are made in advance, as required in section 504 of the Federal Credit Reform Act of 1990.

“(5) PAYMENT OF LOSSES.—For purposes of this section—

“(A) IN GENERAL.—If, as a result of a default by a borrower under a guaranteed loan, after the holder thereof has made such further collection efforts and instituted such enforcement proceedings as the Secretary may require, the Secretary determines that the holder has suffered a loss, the Secretary shall pay to such holder the percentage of such loss (not more than 80 percent) specified in the guarantee contract. Upon making any such payment, the Secretary shall be subrogated to all the rights of the recipient of the payment. The Secretary shall be entitled to recover from the borrower the amount of any payments made pursuant to any guarantee entered into under this section.

“(B) ENFORCEMENT OF RIGHTS.—The Attorney General shall take such action as may be appropriate to enforce any right accruing to the United States as a result of the issuance of any guarantee under this section.

“(C) FORBEARANCE.—Nothing in this section may be construed to preclude any forbearance for the benefit of the borrower which may be agreed upon by the parties to the guaranteed loan and approved by the Secretary, if budget authority for any resulting subsidy costs (as defined under the Federal Credit Reform Act of 1990) is available.

“(D) MANAGEMENT OF PROPERTY.—Notwithstanding any other provision of law relating to the acquisition, handling, or disposal of property by the United States, the Secretary shall have the right in the Secretary's discretion to complete, recondition, reconstruct, renovate, repair, maintain, operate, or sell any property acquired by the Secretary pursuant to the provisions of this section.

“(6) REVIEW.—The Comptroller General of the United States shall, within 2 years of the date of enactment of this section, conduct a review of the subsidy estimates for the loan

guarantees under this subsection, and shall submit to Congress a report on the review conducted under this paragraph.

“(7) TERMINATION.—No loan may be guaranteed under this subsection after September 30, 2012.

“(8) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated—

“(A) \$35,000,000 for the cost, as defined in section 502(5) of the Federal Credit Reform Act of 1990, of guaranteeing \$500,000,000 of loans under this subsection; and

“(B) \$6,000,000 for administrative expenses for fiscal year 2007 and such sums as necessary thereafter for administrative expenses in subsequent years.

“(d) NATIONAL ACADEMY OF SCIENCES EVALUATION.—

“(1) IN GENERAL.—The Secretary shall enter into an agreement with the National Academy of Sciences under which the Academy shall evaluate, on a tri-annual basis, the activities under this section.

“(2) TRI-ANNUAL REPORT.—Under the agreement under paragraph (1), the Academy shall submit to the Secretary a report on its evaluation of science park development under that paragraph. Each report may include such recommendations as the Academy considers appropriate for additional activities to promote and facilitate the development of science parks in the United States.

“(e) TRI-ANNUAL REPORT.—Not later than March 31 of every third year, the Secretary shall submit to Congress a report on the activities under this section during the preceding 3 years, including any recommendations made by the National Academy of Sciences under subsection (d)(2) during such period. Each report may include such recommendations for legislative or administrative action as the Secretary considers appropriate to further promote and facilitate the development of science parks in the United States.

“(f) REGULATIONS.—

“(1) REGULATIONS.—Consistent with Office of Management and Budget Circular A-129, ‘Policies for Federal Credit Programs and Non-Tax Receivables’, the Secretary shall prescribe regulations to carry out this section.

“(2) DEADLINE.—The Secretary shall prescribe such regulations not later than one year after the date of enactment of this section.”

Subtitle E—Authorization of Appropriations for the National Science Foundation for Research and Related Activities

SEC. 251. AUTHORIZATION OF APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION FOR RESEARCH AND RELATED ACTIVITIES.

(a) IN GENERAL.—There is hereby authorized to be appropriated for the National Science Foundation for Research and Related Activities, amounts as follows:

- (1) \$4,195,000,000 for fiscal year 2007.
- (2) \$4,614,000,000 for fiscal year 2008.
- (3) \$5,076,000,000 for fiscal year 2009.
- (4) \$5,584,000,000 for fiscal year 2010.
- (5) \$6,143,000,000 for fiscal year 2011.
- (6) \$6,757,000,000 for fiscal year 2012.
- (7) \$7,432,000,000 for fiscal year 2013.

(b) LIMITATION ON AVAILABILITY.—Amounts authorized to be appropriated for the National Science Foundation by subsection (a) shall not be available for the United States Solar Program and Integrative Activities of the Foundation.

TITLE III—ENSURING THE BEST AND BRIGHTEST REMAIN IN THE UNITED STATES

Subtitle A—Visas for Doctorate Students in Mathematics, Engineering, Technology, or the Physical Sciences

SEC. 311. FINDINGS.

Congress finds the following:

(1) The National Academies, in their congressionally requested report entitled "Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future", recommended that Congress—

(A) continue to improve visa processing for international students and scholars by providing less complex procedures and continuing to make improvements on issues such as visa categories and duration, travel for scientific meetings, the technology-alert list, reciprocity agreements, and changes in status;

(B) provide a 1-year automatic visa extension to international students who receive doctorates or the equivalent in science, technology, engineering, mathematics, or other fields of national need at qualified United States institutions to remain in the United States to seek employment;

(C) provide such students with automatic work permits and expedited residence status if they are offered jobs by employers based in the United States and pass a security screening test;

(D) institute a new skills-based, preferential immigration option that gives applicants with doctorate-level education and science and engineering skills priority in obtaining United States citizenship; and

(E) increase the number of H-1B visas by 10,000, which should be allocated for applicants with doctorate degrees in science, or engineering from a United States university; and

(2) Since the publication of the report by the National Academies, the Senate has passed the Deficit Reduction Act of 2005, which authorizes an additional 30,000 H-1B visas per year.

SEC. 312. SENSE OF THE SENATE.

It is the sense of the Senate that—

(1) the Department of State and the Department of Homeland Security have made significant improvements since 2002 in the efficiency with which visas are processed for—

(A) students at colleges and universities in the United States; and

(B) foreign researchers to engage in appropriate scientific research in the United States;

(2) particular improvements have been made to the MANTIS clearance process, which—

(A) reduce wait times from more than 70 days to less than 15 days; and

(B) extend the duration of the MANTIS clearance process up to 4 years, as appropriate, to cover the duration of study for foreign students in the United States;

(3) both departments and related supporting agencies should further improve efficiency and convenience in the granting of visas to foreign students and researchers while protecting national security;

(4) the departments should extend MANTIS clearance for foreign researchers for the duration of a specified scientific research program while balancing security concerns; and

(5) other such improvements should include—

(A) review of the technology-alert list; and

(B) efforts to better facilitate travel for scientific conferences.

SEC. 313. VISAS FOR DOCTORATE STUDENTS IN MATHEMATICS, ENGINEERING, TECHNOLOGY, OR THE PHYSICAL SCIENCES.

(a) CREATION OF NEW VISA CATEGORY.—Section 101(a)(15)(F) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(15)(F)) is amended—

(1) in clause (i)—

(A) by inserting "(except for a graduate program described in clause (iv))" after "full course of study";

(B) by striking "214(l)" and inserting "214(m)"; and

(C) by striking the comma at the end and inserting a semicolon;

(2) in clause (ii)—

(A) by inserting "or clause (iv)" after "clause (i)"; and

(B) by striking "and" and inserting a semicolon;

(3) in clause (iii), by inserting "and" at the end; and

(4) by adding at the end the following:

"(iv) an alien described in clause (i) who has been accepted and plans to attend an accredited graduate program in mathematics, engineering, technology, or the physical sciences in the United States for the purpose of obtaining a doctorate degree;"

(b) REQUIREMENTS FOR OBTAINING AN F-4 VISA.—Section 214(m) of the Immigration and Nationality Act (8 U.S.C. 1184(m)) is amended—

(1) by striking the matter preceding paragraph (1) and inserting the following:

"(m) NONIMMIGRANT ELEMENTARY, SECONDARY, AND POST-SECONDARY SCHOOL STUDENTS.—"; and

(2) by adding at the end the following:

"(3)(A) An alien who obtains the status of a nonimmigrant under section 101(a)(15)(F)(iv) shall demonstrate an intent to—

"(i) return to the country of residence of such alien immediately after the completion or termination of the graduate program qualifying such alien for such status; or

"(ii) find employment in the United States related to the field of study of such alien and become a permanent resident of the United States upon the completion of the graduate program, which was the basis for such nonimmigrant status.

"(B) A visa issued to an alien under section 101(a)(15)(F)(iv) shall be valid—

"(i) during the intended period of study in a graduate program described in such section;

"(ii) for an additional period, not to exceed 1 year beyond the completion of the graduate program, if the alien is actively pursuing an offer of employment related to the knowledge and skills obtained through the graduate program; and

"(iii) for an additional period, not to exceed 6 months, while the alien's application for adjustment of status under section 245(i)(4) is pending.

"(C) An alien shall qualify for adjustment of status to that of a person admitted for permanent residence if the alien—

"(i) has the status of a nonimmigrant under section 101(a)(15)(F)(iv);

"(ii) has successfully earned a doctorate degree in mathematics, engineering, technology or the physical sciences at an accredited college or university in the United States; and

"(iii) is employed full-time in the United States in a position related to the knowledge and skills gained while pursuing such degree."

(c) ADJUSTMENT OF STATUS.—Section 245(i) of the Immigration and Nationality Act (8 U.S.C. 1255(i)) is amended by adding at the end the following:

"(4) The Secretary of Homeland Security may adjust the status of an alien who meets the requirements under section 214(m)(3) to that of an alien lawfully admitted for permanent residence if the alien—

"(A) makes an application for such adjustment;

"(B) is eligible to receive an immigrant visa;

"(C) is admissible to the United States for permanent residence; and

"(D) remits a fee of \$1,000 to the Secretary."

(d) USE OF FEES.—

(1) JOB TRAINING; SCHOLARSHIPS.—Section 286(s)(1) of the Immigration and Nationality Act (8 U.S.C. 1356(s)(1)) is amended by inserting "and 80 percent of the fees collected under section 245(i)(4)" before the period at the end.

(2) FRAUD PREVENTION AND DETECTION.—Section 286(v)(1) of the Immigration and Nationality Act (8 U.S.C. 1356(v)(1)) is amended by inserting "and 20 percent of the fees collected under section 245(i)(4)" before the period at the end.

SEC. 314. ALIENS NOT SUBJECT TO NUMERICAL LIMITATIONS ON EMPLOYMENT-BASED IMMIGRANTS.

(a) IN GENERAL.—Section 201(b)(1) of the Immigration and Nationality Act (8 U.S.C. 1151(b)(1)) is amended by adding at the end the following:

"(F) Aliens who have earned an advanced degree in science, technology, engineering, or math and have been working in a related field in the United States under a non-immigrant visa during the 3-year period preceding their application for an immigrant visa under section 203(b).

"(G) Aliens described in subparagraph (A) or (B) of section 203(b)(1)(A) or who have received a national interest waiver under section 203(b)(2)(B).

"(H) The immediate relatives of an alien who is admitted as an employment-based immigrant under section 203(b)."

(b) APPLICABILITY.—The amendments made by subsection (a) shall apply to any visa application pending on the date of enactment of this Act and any visa application filed on or after such date of enactment.

Subtitle B—Patent Reform

SEC. 321. PATENT REFORM.

It is the sense of the Senate that—

(1) the United States Patent and Trademark Office should be provided with sufficient resources to make intellectual property protection more timely, predictable, and effective;

(2) the resources described under paragraph (1) should include a 20 percent increase in overall funding to hire and train additional examiners and implement more capable electronic processing; and

(3) Congress should implement comprehensive patent reform that—

(A) establishes a first-inventor-to-file system;

(B) institutes an open review process following the grant of a patent;

(C) encourages research uses of patented inventions by shielding researchers from infringement liability; and

(D) reduces barriers to innovation in specific industries with specialized patent needs.

TITLE IV—REFORMING DEEMED EXPORTS

SEC. 401. SENSE OF SENATE ON EXEMPTION OF CERTAIN USES OF TECHNOLOGY FROM TREATMENT AS EXPORTS.

(a) SENSE OF SENATE.—It is the sense of the Senate that the use of technology by an institution of higher education in the United States should not be treated as an export of such technology for purposes of section 5 of the Export Administration Act of 1979 (50 U.S.C. App. 2404) and any regulations prescribed thereunder, as currently in effect pursuant to the provisions of the International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.), or any other provision of law, if such technology is so used by such institution for fundamental research.

(b) DEFINITIONS.—In this section:

(1) FUNDAMENTAL RESEARCH.—The term "fundamental research" has the meaning given that term in National Security Decision Directive 189, entitled "National Policy

on Transfer of Scientific, Technical, and Engineering Information" and dated September 21, 1985.

(2) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given that term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

TITLE V—STRENGTHENING BASIC RESEARCH AT THE DEPARTMENT OF DEFENSE

SEC. 501. DEPARTMENT OF DEFENSE EARLY-CAREER RESEARCH GRANTS.

(a) PURPOSE.—It is the purpose of this section to authorize research grants in the Department of Defense for early-career scientists and engineers for purposes of pursuing independent research.

(b) DEFINITION OF ELIGIBLE EARLY-CAREER RESEARCHER.—In this section, the term "eligible early-career researcher" means an individual who—

(1) completed a doctorate or other terminal degree not more than 10 years before the date of enactment of this Act and has demonstrated promise in the field of science, technology, engineering, or mathematics; or

(2) has an equivalent professional qualification in the field of science, technology, engineering, or mathematics.

(c) GRANT PROGRAM AUTHORIZED.—

(1) IN GENERAL.—The Secretary of Defense shall award not less than 25 grants per year to outstanding eligible early-career researchers to support the work of such researchers in universities, private industry, or federally-funded research and development centers.

(2) APPLICATION.—An eligible early-career researcher who desires to receive a grant under this section shall submit to the Secretary of Defense an application at such time, in such manner, and accompanied by such information as the Secretary may require.

(3) SPECIAL CONSIDERATION.—In awarding grants under this section, the Secretary of Defense shall give special consideration to eligible early-career researchers who have followed alternative career paths such as working part-time or in non-academic settings, or who have taken a significant career break or other leave of absence.

(4) DURATION AND AMOUNT.—A grant under this section shall be 5 years in duration. An eligible early career-researcher who receives a grant under this section shall receive \$100,000 for each year of the grant period.

(5) USE OF FUNDS.—An eligible early career-researcher who receives a grant under this section shall use the grant funds for basic research in natural sciences, engineering, mathematics, or computer sciences at a university, private industry, or federally-funded research and development center.

(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

- (A) \$2,500,000 for fiscal year 2007;
- (B) \$5,000,000 for fiscal year 2008;
- (C) \$7,500,000 for fiscal year 2009;
- (D) \$10,000,000 for fiscal year 2010; and
- (E) \$12,500,000 for fiscal year 2011.

SEC. 502. AUTHORIZATION OF APPROPRIATIONS FOR THE DEPARTMENT OF DEFENSE FOR BASIC RESEARCH.

There is hereby authorized to be appropriated for the Department of Defense for basic (6.1) research, amounts for the research, development, test, and evaluation accounts of the Department, and for other accounts of the Department providing funding for such research, in the aggregate as follows:

- (1) \$1,616,000,000 for fiscal year 2007.
- (2) \$1,778,000,000 for fiscal year 2008.
- (3) \$1,995,000,000 for fiscal year 2009.

(4) \$2,151,000,000 for fiscal year 2010.

(5) \$2,364,000,000 for fiscal year 2011.

(6) \$2,602,000,000 for fiscal year 2012.

(7) \$2,862,000,000 for fiscal year 2013.

S. 2199

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Protecting America's Competitive Edge Through Tax Incentives Act of 2006" or the "PACE-Finance Act".

SEC. 2. EXPANSION OF CREDIT FOR RESEARCH AND DEVELOPMENT.

(a) CREDIT MADE PERMANENT.—

(1) IN GENERAL.—Section 41 of the Internal Revenue Code of 1986 (relating to credit for increasing research activities) is amended by striking subsection (h).

(2) CONFORMING AMENDMENT.—Paragraph (1) of section 45C(b) of such Code is amended by striking subparagraph (D).

(3) EFFECTIVE DATE.—The amendments made by this subsection shall apply to amounts paid or incurred after the date of the enactment of this Act, in taxable years ending after such date.

(b) CREDIT RATE DOUBLED.—Paragraphs (1) and (2) of section 41(a) of the Internal Revenue Code of 1986 is are each amended by striking "20 percent" and inserting "40 percent".

(c) NEW REGULATIONS AND GUIDELINES AUTHORIZED.—The Secretary of the Treasury shall issue such regulations or guidelines as are necessary—

(1) to provide uniform conduct of tax audits relating to the credit under section 41 of the Internal Revenue Code of 1986, and

(2) to reflect the changing impact of technology on the character of research and development, such as use of databases provided by external parties and the conduct of research and development through joint ventures.

(d) EXPANSION OF CREDIT TO EXPENSES OF GENERAL COLLABORATIVE RESEARCH CONSORTIA.—Section 41 of the Internal Revenue Code of 1986 is amended—

(1) by striking "an energy research consortium" in subsections (a)(3) and (b)(3)(C)(i) and inserting "a research consortium",

(2) by striking "energy" each place it appears in subsection (f)(6)(A),

(3) by inserting "or 501(c)(6)" after "section 501(c)(3)" in subsection (f)(6)(A)(i)(I), and

(4) by striking "ENERGY RESEARCH" in the heading for subsection (f)(6)(A) and inserting "RESEARCH".

(e) STUDY OF FURTHER EXPANSION OF CREDIT.—Not later than 180 days after the date of the enactment of this Act, the Secretary of the Treasury shall study and make recommendations in a report to the President, the Committee on Finance of the Senate, and the Committee on Ways and Means of the House of Representatives on the following possible methods of expanding the scope of the credit under section 41 of the Internal Revenue Code of 1986:

(1) Modification of the credit to remove the incremental approach of measuring creditable research and development expenditures for taxpayers with significant and consistent annual research and development expenditures.

(2) Expansion of qualifying research and development expenditures to include—

(A) certain employee benefit costs related to qualifying wages,

(B) 100 percent of contract research costs,

(C) all expenditures which would qualify for treatment under section 174 of such Code,

(D) any other costs determined appropriate by the Secretary.

(3) Reduction or elimination of limitation of credit under section 280C(c) of such Code.

(f) EFFECTIVE DATE.—Except as otherwise provided, the amendments made by this section shall apply to taxable years beginning after December 31, 2005.

SEC. 3. UNITED STATES-BASED INNOVATION INCENTIVES STUDY.

(a) STUDY.—The Secretary of the Treasury, in consultation with the Director of the Office of Management and Budget, shall conduct an analysis of the United States tax system and its effect on this country as a location for innovation investment and related activities. The analysis shall include a comparison of the tax policies of other nations relating to long-term innovation investment and an examination of various features of the United States tax system, including—

(1) the treatment of capital gains, including the appropriate rate for very long-term investments or the appropriate allowance for loss write-offs,

(2) the overall corporate tax rate, and

(3) incentives for high-tech manufacturing and research equipment through tax credits and accelerated depreciation.

(b) REPORT.—Not later than 180 days after the date of the enactment of this Act, the Secretary of the Treasury shall report on the study and analysis described in subsection (a) to the President, the Committee on Finance of the Senate, and the Committee on Ways and Means of the House of Representatives.

SEC. 4. EMPLOYEE CONTINUING EDUCATION TAX CREDIT.

(a) IN GENERAL.—Subpart D of part IV of subchapter A of chapter 1 of the Internal Revenue Code of 1986 (relating to business related credits) is amended by adding at the end the following new section:

"SEC. 45N. EMPLOYEE CONTINUING EDUCATION CREDIT.

"(a) AMOUNT OF CREDIT.—

"(1) IN GENERAL.—For purposes of section 38, the employee continuing education credit determined under this section with respect to any employer for any taxable year is the applicable percentage of qualified continuing education costs paid or incurred by the employer during the calendar year ending with or within such taxable year.

"(2) APPLICABLE PERCENTAGE.—For purposes of this section, the applicable percentage is the percentage determined by the Secretary such that the amount of the credit allowable under this section for any calendar year does not exceed \$500,000,000.

"(b) QUALIFIED CONTINUING EDUCATION COSTS.—For purposes of this section, the term 'qualified continuing education costs' means costs paid or incurred by an employer for education to maintain or improve knowledge or skills in science or engineering of an employee whose employment requires knowledge or skills in science or engineering.

"(c) REGULATIONS.—The Secretary may prescribe such regulations as may be necessary or appropriate to carry out the purposes of this section, including regulations establishing standards for educational courses and programs to which this section applies."

(b) CREDIT MADE PART OF GENERAL BUSINESS CREDIT.—Section 38(b) of the Internal Revenue Code of 1986 is amended by striking "and" at the end of paragraph (25), by striking the period at the end of paragraph (26) and inserting "and", and by adding at the end the following new paragraph:

"(27) the employee continuing education credit determined under section 45N(a)."

(c) DENIAL OF DOUBLE BENEFIT.—Section 280C of the Internal Revenue Code of 1986 is amended by adding at the end the following new subsection:

“(e) EMPLOYEE CONTINUING EDUCATION CREDIT.—No deduction shall be allowed for that portion of the expenses otherwise allowable as a deduction for the taxable year which is equal to the amount of the credit determined under section 45N(a).”.

(d) CLERICAL AMENDMENT.—The table of sections for subpart D of part IV of subchapter A of chapter 1 of the Internal Revenue Code of 1986 is amended by adding at the end the following new item:

“Sec. 45N. Employee continuing education credit.”.

(e) EFFECTIVE DATE.—The amendments made by this section shall apply to costs paid or incurred in taxable years beginning after December 31, 2005.

Mr. BINGAMAN. Mr. President, I rise today to introduce the Protecting America's Competitive Edge (PACE) Act that will enable us to build on our existing strengths to help secure America's continued economic prosperity in the twenty-first century.

I want to gratefully acknowledge at the outset that I am introducing this legislation with Senator DOMENICI, Senator ALEXANDER, Senator MIKULSKI, and others. This measure is the product of our combined best efforts from both sides of the aisle, and our sole focus has been only on what is in the best interests of the Nation as a whole.

For the last 200 years, our investments in science and technology, both public and private, have driven our economic growth and improved the quality of life in America. They have generated new knowledge and new industries, created new jobs, ensured economic and national security, reduced pollution and increased energy efficiency, provided better and safer transportation, improved medical care, and increased living standards for the American people.

America's scientists and engineers through their unmatched vitality, creativity, and curiosity have helped us not only imagine but invent the future. In large measure, their contributions have made this new century before us so full of promise—molded by science, shaped by technology, and powered by knowledge.

One of the bedrock policies of our Nation's economic security must be to sustain our investments in science and technology. Today there is no dispute that science, and the technology that flows from it, is duly recognized as the piston that drives the economic engine that enriches the quality of our lives.

Yet today our preeminence is precarious.

Numerous thoughtful leaders in government, industry, and academia who are concerned about sustaining U.S. leadership across the frontiers of scientific knowledge are expressing growing uneasiness over troubling trends regarding the Nation's future prosperity. They warn we are slipping in our world leadership role in science and engineering, and losing sight of the importance of long-term investments in creating the conditions of prosperity.

Other nations are coming up fast behind us on the scientific track and are

pouring resources into their scientific and technological infrastructure. There is the distinct possibility that U.S. competitiveness in key high-tech areas will fall behind the major Pacific Rim countries of India, China, Taiwan, and South Korea.

Moreover, the focus of our fundamental R&D has shifted away from the physical sciences, mathematics, and engineering—the critical areas of R&D most closely correlated with innovation and economic growth.

Many of our foremost research programs that have been curtailed or cut back in recent years have been the cornerstone for much of our economic progress and spurred the creation of high paying jobs. Budget increases have been disproportionately concentrated primarily in two departments—Defense and Homeland Security—leaving other vital R&D agencies with very modest increases, or with an increase for some agencies offset by flat funding, or cuts in others.

In the name of national security, we have been building a swaying tower of insecurity.

We are on the brink of a new industrial and commercial world order. The reality of the twenty-first century global economy is that China, India, and other nations once considered economic backwaters have discovered how to build strong economies around very sophisticated technology.

On the Pacific Rim, China has increased spending on colleges and universities almost tenfold in the last decade, and is doubling the proportion of GDP invested in that same period on R&D to promote competitiveness and growth. India is raising its funding of science agencies by 27 percent, and Japan is increasing its investments in life science by 32 percent, while South Korea is upgrading research spending by 8.5 percent.

As our share of the world's technical graduate workforce slips, European and Asian universities are churning out ever greater numbers of workers in scientific fields. And while young Americans may shy away from technical careers because they perceive better opportunities in other high-level occupations, there are still sufficient rewards to attract ever-increasing numbers of foreign graduate students eager to pursue science and engineering degrees.

All of these signs, granted, are a cause for concern. Yet none of them, however, is a cause for panic. To state the facts frankly is not to despair about the future, nor is it to indict the past. Our task today is not to fix the blame for yesterday, but to set the proper and prudent course for tomorrow.

These revolutionary changes in the global marketplace for highly skilled technical workers are dislodging the long-standing dominance of the U.S. scientific enterprise.

That is causing our comparative advantage in high tech production to suffer and, despite the extraordinary

power and resilience of our economy, signals a lengthy and difficult period of adjustment for American industry, its workforce, and ultimately our strong middle class standard of living which makes this country great.

It also flags a pivotal moment in American history—a time of national peril, as well as a time of national opportunity.

What should we do about these international challenges? We have absolutely no choice but to emphasize what we do best in this coming rivalry. Our most important strengths have always been education and innovation. Our can-do spirit of commercializing technological innovation has always been America's core competence. We do it far better than anyone else—we have done it before, and we can continue to excel at it.

Last May, Senator LAMAR ALEXANDER and I asked the National Academy of Sciences to conduct a study to identify “specific steps our government should take to ensure the preeminence of America's scientific and technological enterprise to enable us to successfully compete, prosper, and be secure in the global community of the 21st century.”

The Academy assembled an extraordinarily distinguished panel of America's best scientific minds, including three Nobel Prize winners, business executives, and university leaders and reported their findings back to us in October in a sobering report entitled, *Rising Above the Gathering Storm*.

The National Academy's report proposes four broad recommendations: 1. Increase America's talent pool by vastly improving K–12 science and mathematics education; 2. sustain and strengthen the Nation's traditional commitment to long-term basic research; 3. make the United States the most attractive setting in which to study and perform research; and 4. ensure that the United States is the premier place in the world to innovate.

First and foremost, we need to fix our math and science education system from kindergarten through high school. We should establish a merit-based, 4 year undergraduate scholarship program to annually recruit 10,000 students per year to careers teaching math and science who then commit to working for at least 4 years in K–12 public schools.

Using incentives and scholarships, our aim should be to quadruple the number of America students enrolled in advanced math and science courses to four and a half million by 2010.

A U.S. high school student has about a 70 percent chance of being taught English by a teacher with an English degree, but only a 40 percent chance of being taught chemistry by a teacher with a degree in chemistry. And the situation is worse for middle school students: 70 percent of them are taught math by a teacher lacking a certificate or major in math.

It takes many years to educate a citizen. There are no short term solutions

to this problem, and workforce issues rarely respond to quick fixes and often span generations.

That is why there is such a sense of urgency to recruit thousands of new math and science teachers in the years ahead through the award of competitive scholarships. Additionally, we must strengthen 250,000 current teachers' math and science teaching skills with enhanced training and education by leveraging the expertise of the world's best physicists, mathematicians, and engineers to help provide that training.

This legislation will also provide greater opportunities for students to take advanced math and science classes by increasing the number of students who enroll in Advanced Placement and International Baccalaureate science and math courses.

Second, we must steadily increase our investment by 10 percent each year for the next 7 years in long-term basic research, with special attention devoted to the physical sciences, engineering, mathematics, and information sciences.

The Federal Government supports a majority of the Nation's basic research and nearly 60 percent of the R&D is performed in U.S. universities. At the same time, this investment at universities and colleges plays a key role in educating the next generation of scientists and engineers and a technically skilled workforce. We ought to provide 200 new research grants annually—worth \$500,000 each payable over 5 years—to the Nation's most outstanding early-career researchers.

Additionally, we should consider creating a revolutionary agency in the Energy Department modeled on the highly successful Defense Advanced Research Projects Agency to sponsor research to meet the Nation's long-term energy challenges that industry by itself cannot or will not support.

Just as Olympic-caliber athletes need the finest equipment and training protocols to triumph in their events, so do scientists, engineers and their students need the most modern research instruments and facilities with the best capabilities, the farthest reach, and the finest accuracy and resolution. To enable us to push beyond the frontiers of our current knowledge, we should create a centralized research infrastructure fund of \$500 million annually over the next 5 years to ensure we have the equipment necessary for breakthrough scientific discoveries.

Third, we must increase the number of U.S. citizens earning science, engineering, and math degrees. We must redouble our efforts to encourage gifted young American men and women to pursue these high tech disciplines which require so much from them and which have so much to offer all of our people. We can do so by providing annually 25,000 competitive undergraduate scholarships in physical sciences, engineering, and mathematics, and fund 5,000 new portable graduate fellowships in those fields.

Equally important, we need a global recruitment strategy to attract the best and brightest to learn and live in America as part of our high tech workforce. Our visa, immigration and export control policies desperately need reform. Delays and difficulties in obtaining visas to the U.S. are contributing to a declining in-flow of scientific talent.

We need to ensure the best and brightest come here, stay here, and obtain legal residency after college to contribute to our national economy instead of being forced back to their home countries to compete against us.

Finally, we need to be able to assure investors that the U.S. is the preferred site for investments in new or expanded businesses that create the best jobs and provide the best services.

To spur U.S.-based research and experimentation to meet global competition, we need to modernize the patent system, realign our tax policies to encourage long-term investments in innovation, and ensure the Nation meets the goal of affordable broadband Internet access by 2007.

Our patent laws must also be reformed by moving to a first-to-file instead of a first-to-invent, thus bringing us into line with the rest of the world while reducing expensive litigation. Infrastructure planning grants and loan guarantees could also ensure that U.S. science parks are competitive with those throughout Asia.

Additionally, we should eliminate uncertainty by doubling the R&D tax credit and making it permanent. Studies document that this tax credit encourages as much R&D spending as it costs in foregone revenue—and perhaps even twice that amount over the long haul.

We face a competitive challenge of historic proportions today due to several new factors: The growing number of countries with advanced skills, multinational corporations placing their R&D centers, fueled by high education and low labor costs, wherever the profits are the greatest, and virtually every service being electronically communicable.

It will be difficult to ever match our populous economic competitors in the quantity of their scientists and engineers. Ours is an even tougher task: to stay far ahead in the quality of our research and to keep pioneering scientific fields so cutting edge that others, for the most part, cannot duplicate them.

We can readily meet this challenge and enjoy a prosperous future, even though these investments in education and research require incurring costs now for benefits later.

The PACE Act will sustain our vibrant science and technology sector and with it our well-being, health, environment, and security.

It will encourage education at home and attract talented scientists and engineers from abroad, as well as nurture a business environment that trans-

forms new knowledge into new opportunities for creating high quality jobs and reaching shared goals.

The passage of this farsighted public investment program will ensure that the United States is stronger, smarter, and leads the world in scientific and technological innovation in the twenty-first century.

Mr. ALEXANDER. Mr. President, today I join with Senators DOMENICI, BINGAMAN, MIKULSKI, and more than 25 other senators, in introducing the Protecting America's Competitive Edge (PACE) Act—a package of three bills to enhance American brainpower.

America is now playing in a tougher league. China and India are competing for our jobs. The best way to keep those jobs in America is to maintain our brainpower edge in science and technology.

The story of this bill really began last May, when Senator JEFF BINGAMAN and I, with the encouragement of Senate Energy Committee Chairman PETE DOMENICI, asked the National Academies this question: "What are the ten top actions, in priority order, that Federal policy makers could take over the next decade to help the United States keep our advantage in science and technology?"

To answer the question, the Academies assembled a distinguished panel of business, government, and university leaders headed by Norm Augustine, former CEO of Lockheed Martin, that included three Nobel Prize winners. They took our question seriously. We asked them for 10 recommendations; they gave us 20 when they released their report in October.

In October, the Energy Committee held a hearing to learn more about those recommendations from Mr. Augustine and the Academies. It was the first opportunity Congress had to hear the Academies' answer to our question.

Following those hearings, Chairman DOMENICI, Senator BINGAMAN, and I convened a series of "homework sessions" with members of the Academies, outside experts, and some officials in the Administration. These off-the-record sessions allowed Senators and Administration officials to grapple with the Academies' recommendations and consider how best to implement them.

Last November, Norm Augustine led a dinner discussion hosted by Senator FRIST with about 30 Senators on the report's recommendations right here in the Capitol. And then, in December, Senators DOMENICI, BINGAMAN, and I met with President Bush where he graciously listened to our ideas. The President was very engaged and knew these issues well.

Now, as the Senate begins its session for the year, we are introducing this legislation to implement the recommendations of the Augustine Report. Next week, when the President addresses the nation in his State of the Union address, it is my hope that he will make this a focus of the address and his remaining three years in office.

This bill is all about brainpower and the relationship of brainpower to good American jobs.

The United States produces more than 25 percent of all the wealth in the world (in terms of GDP)—but has only 5 percent of the world's population. We are a fortunate country indeed. The Academies explain this phenomenon in this way: “. . . as much as 85 percent of measured growth in U.S. income per capita is due to technological change.”

This technological change is the result, in the report's words, of an outpouring “of well trained people and the steady stream of scientific and technological innovations they produce.”

Most of this good fortune comes from the American advantage in brainpower: an educated workforce, and our technological innovation. The United States has the finest system of colleges and universities on earth, attracting more than 500,000 of the brightest foreign students. No country has national research laboratories to match ours. Americans have won the most Nobel prizes in science and registered the most patents. We have invented electricity, the computer chip, and the internet.

As one scientist noted, we don't have science and technology because we're rich. We're rich because we have science and technology.

Yet we worry that America may be losing its brainpower advantage. American experts who travel to China, India, Finland, Singapore, Ireland, and elsewhere come home saying, “Watch out.”

The Augustine Report found that we are right to be worried: Only 6 percent of American college-age students earn degrees in the natural sciences or engineering, trailing students in China and India and a dozen other countries, many of which have doubled or tripled their degree output over the last decade. For the cost of one chemist or engineer in the United States, a company can hire five chemists in China or 11 engineers in India. China is spending billions to recruit the best Chinese scientists from American universities to return home to build up Chinese universities.

The report also found signs that we are not keeping up: U.S. 12th graders performed below the average of 21 countries on tests of general knowledge in math. In 2003 only three American companies ranked among the top 10 recipients of new U.S. patents. Of 120 new chemical plants being built around the world with price tags of \$1 billion or more, one is in the United States and 50 are in China.

To maintain America's global leadership in research and development, the Augustine Report made twenty wide-ranging and urgent recommendations for U.S. schools, universities, research, and economic policy that include: Recruit 10,000 new science and math teachers with 4-year scholarships and train 250,000 current teachers in summer institutes. Create a new coordinating office to manage a centralized

research infrastructure fund of at least \$500 million per year. Provide 30,000 scholarships and graduate fellowships for scientists. Increase federal funding for basic research in the physical sciences by 10 percent a year for 7 years. Give American companies a bigger research and development tax credit so they will keep their good jobs here instead of move them offshore. Create a new agency in the Department of Energy modeled on the Defense Advanced Research Projects Agency to conduct breakthrough R&D, that will lessen our dependence on foreign sources of energy.

Some may wince at the price tag—\$9 billion in the first year, and then it edges upward over the full seven year period. I believe the cost is low, relative to the benefits. Maintaining America's brainpower advantage will not come on the cheap.

This year, one third of State and local budgets go to fund education. More than 50 percent of American students have a Federal grant or loan to help pay for college. The Federal Government spends nearly \$30 billion per year on research at universities and another \$34 billion to fund 36 national research laboratories.

Just last year, Congress spent \$85 billion to fight the war in Iraq, \$71 billion for hurricane recovery, and \$352 billion to finance the national debt. If we fail to invest the funds necessary to keep our brainpower advantage, we'll not have an economy capable of producing enough money to pay the bills for war, social security, hurricanes, Medicaid, and debt.

The legislation we are introducing today has strong bipartisan support. It is our hope President Bush will make it a focus of his State of the Union Address and of his remaining 3 years in office—and that future candidates for president will make it the center of their campaigns. Aside from our national security, there is no greater challenge than maintaining our brainpower advantage so we can keep our good paying jobs and strengthen our economy. That is the surest way to keep America on top.

I hope my colleagues will join us in this critical effort to protect America's competitive edge.

Ms. MIKULSKI. Mr. President, I'd like to thank my colleagues: Senator PETE DOMENICI, Senator JEFF BINGAMAN and Senator LAMAR ALEXANDER for their effort in moving this issue. I am so proud of our great bipartisan team. I can't say enough about the appreciation that many of us in the Senate feel about their initiation of the report, “Rising Above the Gathering Storm,” which is the basis for our legislation, the PACE Act.

America must remain an innovation economy. This legislation creates the building blocks that we need for a smarter America. Our Nation is in an amazing race—the race for discovery and new knowledge. The race to remain competitive and to foster an innova-

tion society, to create new ideas that lead to new breakthroughs, new products and new jobs. The innovations that have the power to save lives, create prosperity and protect the homeland. The innovation to make America safer, stronger and smarter.

Our legislation is called “Protecting America's Competitive Edge” Act or PACE. It is divided into 3 sections: Energy, Education and Tax. It calls for: getting new ideas by doubling Federal funding for basic research in the Department of Energy with special attention going to physical sciences, engineering, math and information sciences; getting the best minds with scholarships for future math and science teachers including \$20,000 scholarships from the National Science Foundation (NSF) for undergraduate students majoring in math or science along with teacher certification; visa reform for foreign science and math students so the best and brightest can stay here, creating a new student visa for doctoral students studying math and science so they can stay in the U.S. longer; and an extension of the R & D tax credit, doubling the current R & D credit, from 20 percent to 40 percent, expanding the credit to cover all research—since current law only allows credit for energy research.

Why is this so important? Because a country that doesn't innovate, stagnates. The whole foundation of American culture and economy is based on the concept of discovery and innovation. That's part of our culture. When you look at what has made America a superpower, it's our innovation and our technology. We have to look at where the new ideas are going to come from that are going to generate the new products for the 21st century.

I want America to win the Nobel prizes and the markets. This legislation will help to set the framework. It will make sure that we're helping our young people with scholarships and new visas, and helping our science teachers and those working in science with funding and research opportunities. We also are forming partnerships with the private sector, and building an innovation-friendly government.

This is so important to me and I'm going to use my committee responsibility and my work and expertise in the United States Senate to make it happen. Whether it's my position on the HELP Committee, working to pass the education piece, or in my seat as an appropriator and Vice Chair on the subcommittee that funds Science. I will work to make sure that there is money in the federal checkbook to support these important proposals.

By Mr. LUGAR:

S. 2200. A bill to establish a United States-Poland parliamentary youth exchange program, and for other purposes; to the Committee on Foreign Relations.

Mr. LUGAR. Mr. President, I rise today to offer legislation urging the

Administration to develop a United States—Poland Parliamentary Youth Exchange Program.

The purpose of this exchange program is to demonstrate to the youth of the United States and Poland the benefits of friendly cooperation between the U.S. and Poland based on common political and cultural values. I have long been an active supporter of the Congress-Bundestag Exchange program and am hopeful that this new endeavor will make similarly important lasting contributions to the U.S.-Polish relationship.

As a Rhodes Scholar, I had the opportunity to discover international education at Pembroke College—my first trip outside of the United States. The parameters of my imagination expanded enormously during this time, as I gained a sense of how large the world was, how many talented people there were, and how many opportunities one could embrace. Student exchange programs do more than benefit individual scholars and advance human knowledge. Such programs expand ties between nations, improve international commerce, encourage cooperative solutions to global problems, prevent war, and give participants a chance to develop a sense of global service and responsibility.

Funding a great foreign exchange program is a sign of both national pride and national humility. Implicit in such a program is the view that people from other nations view one's country and educational system as a beacon of knowledge—as a place where international scholars would want to study and live. But it is also an admission that a nation does not have all the answers—that our national understanding of the world is incomplete. It is an admission that we are just a part of a much larger world that has intellectual, scientific, and moral wisdom that we need to learn.

The United States and Poland have enjoyed close bilateral relations since the end of the Cold War. Most recently, Poland has been a strong supporter of efforts led by the United States to combat global terrorism, and has contributed troops to and led coalitions in both Afghanistan and Iraq. Poland also cooperates closely with the United States on such issues as democratization, human rights, regional cooperation in Eastern Europe, and reform of the United Nations. As a member of the North Atlantic Treaty Organization, NATO, and the European Union, EU, Poland has demonstrated its commitment to democratic values and is a role model in its region.

I believe that it is important to invest in the youth of the United States and Poland in order to strengthen long-lasting ties between both societies. After receiving for many years international and U.S. financial assistance, Poland is now determined to invest its own resources toward funding a U.S.-Poland exchange program. To this end, the Polish Foreign Minister unambigu-

ously stated that Poland welcomed the opportunity to be an equal partner in funding important efforts.

I ask my colleagues to support this legislation.

By Mr. OBAMA (for himself, Mr. INOUE, Mrs. MURRAY, and Mr. LAUTENBERG):

S. 2201. A bill to amend title 49, United States Code, to modify the mediation and implementation requirements of section 40122 regarding changes in the Federal Aviation Administration personnel management system, and for other purposes; to the Committee on Commerce, Science, and Transportation.

Mr. OBAMA. Mr. President, in the hours after the terrorist attacks on 9/11, America's air traffic controllers rose to meet the tremendous challenges of that day.

After halting all takeoffs, controllers began clearing the skies over America. Under unprecedented conditions, controllers guided 4,500 planes carrying 350,000 passengers to safe landings. They also rerouted more than 1,100 of the 4,500 flights within the first 15 minutes of the landing order—about one every second—and cleared the skies over America within 2½ hours.

That kind of performance was wholly dependent on the caliber and training of the world's finest air traffic controllers. And as I come to the floor of the Senate today, there are hundreds of pilots flying commercial airplanes under an air traffic controller's guidance. Each and every day, the lives of thousands of people are in the hands of each and every air traffic controller.

Because what they do is vital to our safety, I became very concerned by a letter I received from Illinois air traffic controller Michael Hannigan last December. He wrote that “the air traffic controllers, who work aircraft everyday, often six days a week, are not being allowed to negotiate in good faith with the Federal Aviation Administration.” And he asked for me to help “the hard working Federal employees that want the protections as a labor union that they should have a right to bargain for.”

What was clear in Michael's plea was the sense that he and his colleagues felt that they were being treated unfairly. I looked into it and came to the conclusion that if we did not restore a fair negotiation procedure, it would threaten agency morale and effectiveness.

The problem is this: lower courts have determined that the FAA Administrator currently has the extraordinary authority to impose wages and working conditions on her workers without arbitration. In order to do that, she merely has to declare an impasse in negotiations and if Congress does not set everything else aside and stop her from imposing her terms and conditions within 60 days, the Administrator can go ahead and act unilaterally. That authority denies air traffic

controllers and all other FAA employees the opportunity to engage in and conclude negotiations in good faith.

To diffuse the management-labor tension at the agency and bring the FAA together, I am introducing “The FAA Fair Labor Management Dispute Resolution Act of 2006”. I am also proud to say that Senator INOUE, the co-chair of the Senate Commerce, Science and Transportation Committees; Senator MURRAY, the ranking member on the Transportation Appropriations Subcommittee; and Senator LAUTENBERG, a member on the Commerce Committee Subcommittee on Transportation, are joining me in this effort.

The FAA Fair Labor Management Dispute Resolution Act replaces the FAA Administrator's arbitrary authority with neutral binding arbitration in the case of an impasse in labor-management negotiations. In arbitration, both labor and management would have to make concessions, and both would be able to accept the outcome as fair.

We need this legislation now because the FAA Administrator is engaged in contract negotiations with the agency's two largest groups of workers—the National Air Traffic Controllers Association (NATCA) and Professional Airways Systems Specialists (PASS). In both cases, negotiations have been contentious. And the FAA's workers fear that the Administrator is not intent on reaching fair, voluntary agreements given her previous negotiations. Indeed, the Administrator has already used her authority to impose wages and working conditions without arbitration or agreement on NATCA's 11 non-air traffic controller bargaining units, and she stands at impasse with four of PASS's five bargaining units.

The Administrator has made three arguments in defense of her actions: 1. the FAA needs the authority “to operate more like a business”; 2. air traffic controller pay is “inappropriate given the financial circumstances of the airline industry the system serves”; and 3. changing the law to send an impasse to binding arbitration would essentially “change the rules of the game during halftime.”

But the agency's employees point out that the agency is not a business driven to cut costs in pursuit of profit, it is a public agency with no margin for error. They also argue that the nation's air safety should not depend on how well or poorly the airlines are doing financially. And, if the rules are unfair, the employees argue they should be changed before negotiations conclude.

Regardless of the merits of each side's positions, if the Administrator is able to impose her chosen conditions on air traffic controllers, it will have two negative effects on the agency: 1. it will lead to an erosion of talent at the agency with vital, retirement-eligible air traffic controllers interpreting such agency action as an invitation to

retire; and 2. it will make recruiting needed replacement employees that much more difficult.

I recognize that negotiations between the Administrator and the air traffic controllers are difficult. However, it is in the best interest of the agency and public safety to have management and labor cooperate in contract negotiations and if that is impossible, then no one side should be able to impose its views on the other. Only neutral arbitration can produce a fair outcome that the entire organization can accept.

More than 2,900 air traffic controllers will be eligible to retire this year, and 7,100 controllers could leave the agency within the next nine years. Meeting this management challenge will require cooperation between labor and management. Moreover, rising tension between the FAA Administrator and FAA employees threatens this vital agency's effectiveness at every level and, as a result, threatens the safety of passengers.

Again, the legislation we are introducing today would encourage both sides in all FAA labor-management negotiations to reach a voluntary agreement and in the case of impasse, it would allow the FAA to move forward after binding arbitration, bring its workers together, and focus on other challenges because no one side will have had arbitrary authority.

The FAA's employees are dedicated, hard working public servants responsible for helping ensure the safety of the flying public. It is stressful, important work. We must value that work and treat them fairly.

By Mr. LEAHY (for himself, Mr. KERRY, and Mr. FEINGOLD):

S. 2202. A bill to provide for ethics reform of the Federal judiciary and to instill greater public confidence in the Federal courts; to the Committee on the Judiciary.

Mr. LEAHY. Mr. President, I am pleased to introduce the Fair and Independent Judiciary Act of 2006 because ensuring a fair and independent judiciary is critical to the system of checks and balances established in our Constitution. This legislation seeks to preserve the public confidence that our Federal courts enjoy, and that our courts need to adequately fulfill their constitutional role in our system. Revelations that judges and justices are receiving gifts from parties that may appear before them or have a financial interest in a litigating party undermine the public's trust.

For the past 4 years, editorial boards across the country have called our attention to the appearance of impropriety that occurs when Federal judges accept gifts and attend lavish private seminars sponsored by well-heeled corporations. I have proposed similar legislation in previous Congresses to address the problem of private judicial seminars. Last year, despite my ongoing concerns about reports of judicial

activities that undermine public confidence, I withheld these provisions from a judicial pay raise bill. I had hoped that the Federal judiciary would engage in self-regulation on these timely and substantive ethical issues. Unfortunately, recent press reports show continued appearances of impropriety, even by a member of the Supreme Court. This legislation does not prohibit judges and justices from attending educational seminars. Instead, it simply requires them to learn and disclose the private sponsors of the seminars and make that information public. Then, they would be allowed to attend the seminars, but at the court's expense, instead of having special interests pick up their tabs.

Another issue that threatens to undermine confidence in our judicial impartiality was highlighted at the recent hearings for Judge Alito. Some judges fail to monitor their financial holdings so that they can properly recuse themselves from cases where there may be a conflict of interest. One way to be sure that the recusal laws Congress enacted are being followed by all Federal judges is to allow more transparency of a judge's financial conflicts. This legislation contains a provision to improve the public's access to the recusal lists that all judges keep within their chambers or clerks' offices.

Because the public's trust is at stake, it is important to require that private seminar providers fully disclose the litigation interests of their sponsors and to improve access to judicial conflicts. The American people deserve a Federal judiciary that is beyond reproach—in appearance, and otherwise. The Fair and Independent Judiciary Act seeks to ensure continued public confidence in our Federal courts. I ask unanimous consent that the text of the bill be printed in the RECORD.

There being no objection, the text of the bill was ordered to be printed in the RECORD, as follows.

S. 2202

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Federal Judiciary Ethics Reform Act of 2006".

SEC. 2. JUDICIAL EDUCATION FUND.

(a) ESTABLISHMENT.—Chapter 42 of title 28, United States Code, is amended by adding at the end the following:

"§ 630. Judicial Education Fund

"(a) In this section, the term—

"(1) 'institution of higher education' has the meaning given under section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a));

"(2) 'private judicial seminar'—

"(A) means a seminar, symposia, panel discussion, course, or a similar event that provides continuing legal education to judges; and

"(B) does not include—

"(i) seminars that last 1 day or less and are conducted by, and on the campus of, an institute of higher education;

"(ii) seminars that last 1 day or less and are conducted by national bar associations

or State or local bar associations for the benefit of the bar association membership; or

"(iii) seminars of any length conducted by, and on the campus of an institute of higher education or by national bar associations or State or local bar associations, where a judge is a presenter and at which judges constitute less than 25 percent of the participants;

"(3) 'national bar association' means a national organization that is open to general membership to all members of the bar; and

"(4) 'State or local bar association' means a State or local organization that is open to general membership to all members of the bar in the specified geographic region.

"(b) There is established within the United States Treasury a fund to be known as the 'Judicial Education Fund' (in this section referred to as the 'Fund').

"(c) Amounts in the Fund may be made available for the payment of necessary expenses, including reasonable expenditures for transportation, food, lodging, private judicial seminar fees and materials, incurred by a judge or justice in attending a private judicial seminar approved by the Board of the Federal Judicial Center. Necessary expenses shall not include expenditures for recreational activities or entertainment other than that provided to all attendees as an integral part of the private judicial seminar. Any payment from the Fund shall be approved by the Board.

"(d) The Board may approve a private judicial seminar after submission of information by the sponsor of that private judicial seminar that includes—

"(1) the content of the private judicial seminar (including a list of presenters, topics, and course materials); and

"(2) the litigation activities of the sponsor and the presenters at the private judicial seminar (including the litigation activities of the employer of each presenter) on the topic related to those addressed at the private judicial seminar.

"(e) If the Board approves a private judicial seminar, the Board shall make the information submitted under subsection (d) relating to the private judicial seminar available to judges and the public by posting the information on the Internet.

"(f) The Judicial Conference shall promulgate guidelines to ensure that the Board only approves private judicial seminars that are conducted in a manner so as to maintain the public's confidence in an unbiased and fair-minded judiciary.

"(g) There are authorized to be appropriated for deposit in the Fund \$2,000,000 for each of fiscal years 2006, 2007, and 2008, to remain available until expended."

(b) TECHNICAL AND CONFORMING AMENDMENT.—The table of sections for chapter 42 of title 28, United States Code, is amended by adding at the end the following:

"630. Judicial Education Fund".

SEC. 3. PRIVATE JUDICIAL SEMINAR GIFTS PROHIBITED.

(a) DEFINITIONS.—In this section, the term—

(1) "institution of higher education" has the meaning given under section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a));

(2) "private judicial seminar"—

(A) means a seminar, symposia, panel discussion, course, or a similar event that provides continuing legal education to judges; and

(B) does not include—

(i) seminars that last 1 day or less and are conducted by, and on the campus of, an institute of higher education;

(ii) seminars that last 1 day or less and are conducted by national bar associations or

State or local bar associations for the benefit of the bar association membership; or

(iii) seminars of any length conducted by, and on the campus of an institute of higher education or by national bar associations or State or local bar associations, where a judge is a presenter and at which judges constitute less than 25 percent of the participants.

(3) "national bar association" means a national organization that is open to general membership to all members of the bar; and

(4) "State or local bar association" means a State or local organization that is open to general membership to all members of the bar in the specified geographic region.

(b) IN GENERAL.—Not later than 240 days after the date of enactment of this Act, the Judicial Conference of the United States shall promulgate regulations to apply section 7353(a) of title 5, United States Code, to prohibit the solicitation or acceptance of anything of value in connection with a private judicial seminar.

(c) EXCEPTION.—The prohibition under the regulations promulgated under subsection (b) shall not apply if—

(1) the judge participates in a private judicial seminar as a speaker, panel participant, or otherwise presents information;

(2) Federal judges are not the primary audience at the private judicial seminar; and

(3) the thing of value accepted is—

(A) reimbursement from the private judicial seminar sponsor of reasonable transportation, food, or lodging expenses on any day on which the judge speaks, participates, or presents information, as applicable;

(B) attendance at the private judicial seminar on any day on which the judge speaks, participates, or presents information, as applicable; or

(C) anything excluded from the definition of a gift under regulations of the Judicial Conference of the United States under sections 7351 and 7353 of title 5, United States Code, as in effect on the date of enactment of this Act.

SEC. 4. RECUSAL LISTS.

Section 455 of title 28, United States Code, is amended by adding at the end the following:

"(g)(1) Each justice, judge, and magistrate of the United States shall maintain a list of all financial interests that would require disqualification under subsection (b)(4).

"(2) Each list maintained under paragraph (1) shall be made available to the public at the office of the clerk for the court at which a justice, judge, or magistrate is assigned."

By Mrs. CLINTON (for herself and Mr. NELSON of Florida):

S. 2203. A bill to amend title XVIII of the Social Security Act to eliminate cost-sharing under part D of such title for certain full-benefit dual eligible individuals; to the Committee on Finance.

Mrs. CLINTON. Mr. President, today I rise to introduce legislation to address yet another serious flaw in the Medicare prescription drug benefit that has come to light.

On January 1, the new Medicare prescription drug benefit went into effect. Overnight, millions of seniors and disabled Americans found themselves thrown into a confusing and complex transition.

Some of our poorest and most vulnerable beneficiaries, those in assisted living facilities, have found themselves suddenly forced to produce copayments to get the medications they need.

These are beneficiaries with serious mental illnesses who have been stabilized on medications, and people with developmental and physical disabilities who have little or no incomes and no way to afford the medicines that they depend on.

The bill I am introducing will fix this problem by waiving copayments for this group of vulnerable beneficiaries and reimbursing them for any copayments they have already been forced to shoulder.

This is just one of so many problems we have seen plaguing this program. The first 26 days of this program have been a disaster for far too many seniors and disabled across New York and across the country.

We have heard reports from our poorest seniors, who were being charged hundreds of dollars for drugs. We have heard reports of disabled individuals asked to provide doctor's notes certifying a need for their medications and of beneficiaries leaving pharmacies without the drugs they depend on to keep them healthy.

As a result of problems with computer systems, phone lines, and the inability of Medicare and private plans to provide correct information to those on the front lines of care, millions of people around the country have faced problems receiving this new benefit.

I am working on all fronts to help Medicare beneficiaries weather this transition. Before this program went into effect, it was clear that those dually eligible for Medicare and Medicaid, our poorest and most vulnerable seniors and disabled, would have a particular challenge navigating this transition. I was very concerned that many these Medicare recipients would walk up to their pharmacy counters on January 1 and be unable to get their prescriptions filled.

In anticipation of these problems, I introduced legislation in December to keep these Medicare recipients from falling through the cracks by stepping up outreach and education to pharmacists and providing reimbursement to pharmacists who are charged a transaction fee to access beneficiary information through Medicare. I also cosponsored legislation to give Medicare beneficiaries more time to enroll in the new program.

And I issued a resource guide, now available in both English and Spanish, to help New Yorkers navigate this new program. To date more than 75,000 copies of the guide have been distributed.

Since the new program went into effect, I have repeatedly urged the Bush administration to address the problems plaguing this program. And last week, I introduced comprehensive legislation along with several of my Senate colleagues, that includes my bill to help pharmacists help their customers, and makes the other fixes I have been calling for: provisions to improve outreach and education, fix problems with drug plans transition programs, protect the benefits of seniors who also have cov-

erage from a retiree drug plan, and make sure that States and low income beneficiaries are reimbursed for excessive costs they have been forced to shoulder by the inept implementation of the new benefit.

We owe it to our seniors and disabled Americans to get this right. And I will keep fighting to ensure that we do.

SUBMITTED RESOLUTIONS

SENATE RESOLUTION 354—HONORING THE VALUABLE CONTRIBUTIONS OF CATHOLIC SCHOOLS IN THE UNITED STATES

Mr. VITTER submitted the following resolution; which was referred to the Committee on Health, Education, Labor, and Pensions:

S. RES. 354

Whereas Catholic schools in the United States have received international acclaim for academic excellence while providing students with lessons that extend far beyond the classroom;

Whereas Catholic schools present a broad curriculum that emphasizes the lifelong development of moral, intellectual, physical, and social values in the young people of the United States;

Whereas Catholic schools in the United States today educate 2,420,590 students and maintain a student-to-teacher ratio of 15 to 1;

Whereas the faculty members of Catholic schools teach a highly diverse body of students;

Whereas more than 27.1 percent of school children enrolled in Catholic schools are minorities, and more than 13.6 percent are non-Catholics;

Whereas Catholic schools saved the United States \$19,000,000,000 in educational funding during fiscal year 2005;

Whereas Catholic schools produce students strongly dedicated to their faith, values, families, and communities by providing an intellectually stimulating environment rich in spiritual, character, and moral development; and

Whereas in the 1972 pastoral message concerning Catholic education, the National Conference of Catholic Bishops stated, "Education is one of the most important ways by which the Church fulfills its commitment to the dignity of the person and building of community. Community is central to education ministry, both as a necessary condition and an ardently desired goal. The educational efforts of the Church, therefore, must be directed to forming persons-in-community; for the education of the individual Christian is important not only to his solitary destiny, but also the destinies of the many communities in which he lives." Now, therefore, be it

Resolved, That the Senate—

(1) supports the goals of Catholic Schools Week, an event cosponsored by the National Catholic Educational Association and the United States Conference of Catholic Bishops that recognizes the vital contributions of thousands of Catholic elementary and secondary schools in the United States; and

(2) congratulates Catholic schools, students, parents, and teachers across the United States for their ongoing contributions to education, and for the vital role they play in promoting and ensuring a brighter, stronger future for this Nation.